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Delivered at the National Hospital for the Paralysed and Epileptic on Feb. 13th, 1906,

BY THOMAS BUZZARD, M.D. LOND., F.R.C.P. LOND.,

CONSULTING PHYSICIAN TO THE HOSPITAL.

GENTLEMEN,—It was in 1876[1] that Dr. J. Hughlings Jackson called particular attention to what have been described as "intellectual aurse or intellectual warnings of epileptic seizure" apd quoted descriptions given by some epileptic patients. "Old scenes revert" one of these would say; "I feel in some strange place" said another. Others spoke of "a pancrama of something familiar and yet strange." "If I were walking along and had a fit I should think 'Oh, I saw that before.'" For such mental operations as these and the like he invented the term "dreamy state." Although the state described was doubtless an intellectual one it was not, in his opinion, an intellectual "aura" or "warning." In 1879[2] he again referred to "dreamy states in connexion with epilepsy." In one patient referred to there was a feeling of "being somewhere else." This patient's fits began with a crude sensation-warning of smell. Another described a feeling "as if dreams were mixed up with present thought." "I can't usually remember it," said another; "in the last it was about gipsies." In this patient, again, the attack was ushered in by an unreal sensation of smell. This sensation of smell was also described by another who saw "the pillars of an old Gothic church and people standing about in the building."

Before Dr. Hughlings Jackson called attention to these interesting associations they had attracted but little notice in this country, although they had been described in France by Falret, Voisin, and especially by Herpin. Dr. Hughlings Jackson dwelt also upon epigastric-warning sensations in this class of case and these were sometimes liable to be accompanied by a sensation of fear. In some cases the patients used the words "a frightful feeling, worse than any pain," "I feel frightened," "perfect anguish and despair." In 1899 he suggested for the group of cases thus characterised the name of "uncinate group of fits," on the hypothesis that "the discharge lesions in these cases are made up of some cells, not of the uncinate gyrus alone, but of cells of different parts of a region of which this gyrus is part ..... the uncinate region." He pointed out that in many examples of the class, though not in all, movements were associated with the sensory symptoms and intellectual states described—movements such as smacking of the lips, tasting, masticatory (sometimes also spitting), and these he considered to be significant of discharge lesion of elements of Ferrier's cortical taste centre. Guided by Ferrier's researches diagnosis of lesion of the uncinate gyrus was made by him in a case which he published in conjunction with Dr. W. S. Colman in the winter number of *Brain*, 1898. The "dreamy state," he thinks, is indirectly localising, since it occurs in nearly all, though not in every one, of the group of uncinate fits. The cases brought forward to-day serve to illustrate this subject of lesion in the uncinate district.

CASE 1.—The patient is a girl, aged 16 years, who was admitted into the hospital under my care in November last, on account of headache, vomitings, fits, with occasional loss of power on the left side. Very careful notes of her case were taken by Dr. F. L. Golla, who was then resident medical officer. The patient is the second child in a family of six, of which the other members are healthy. She had had measles but otherwise no illness. She had always been of slow intelligence and had never learned to read or write at school. 11 weeks before admission, whilst in domestic service, she began to complain of severe headache (to which she had not been accustomed) and on one or two occasions vomited. A week later her mother was called to find her just recovering from a fit that had seized her when at work. She was taken home and had since had attacks of fits occurring at intervals of a fortnight or so. These usually began by her calling out that she was frightened and that she "saw men or objects coming to kill her." She generally pointed to the right as the direction from which the objects appeared to come, but they seemed to station themselves on her left. Sometimes she would cry out that the chairs and tables had come to life and were going to kill her. At other times the objects were in the form of stags or snakes. Being questioned she described having once (before suffering from fits) been to a theatre where she saw a snake curling itself round a "lady" (probably a charmer). The fits developed into attacks of screaming and throwing her limbs about. A succession of attacks of this kind might last for 24 hours and be followed by a condition of profound coma. On several occasions before admission she described a sensation of numbness and weakness in the left leg which began in the toes, ascended the leg, then affecting the left shoulder and descending the arm to the fingers. She never had it in the face and she thought not in the body. For some time after such an attack she would feel weak "all over the left side." Sometimes there would be a dull pain in the *right* leg and arm accompanying such sensations. There were frequent giddiness and subjective rotation of self and objects from left to right. Occasionally she had a taste in her mouth which was confined to the left side of her tongue and was described as "horrible." It had been noticed that in walking she was inclined to lurch over to her left. She had occasionally complained of a noise "like a steam engine" in her head. During the night and also by day she frequently saw "snakes crawling on her bed" and once or twice a stag ran over her from the right. The stag was brown in colour and the snakes were black and shiny. The headaches were chiefly over the left fronto-parietal region.

The patient is described in the notes as "a heavy-looking, under-sized girl, with small eyes, pug-nose, and the aspect of one mentally defective. Smell and taste are both deficient but not perhaps more so than might be expected in one of her mental calibre. She is unable to identify most odours. Vision: R. = ⅚; L. = ⅚. The optic discs are thought to be rather full coloured but not definitely abnormal. The visual fields are apparently normal. The pupils are equal and contract to light and accommodation. All eye movements are well performed. There is no diplopia nor nystagmus. There is some doubtful right-sided facial weakness, ill-defined, more noticeable in the orbicularis palpebrarum than elsewhere. The hearing is fair on each side and there is no loss in regard to high notes. The tongue is protruded in clumsy fashion and it is thought, though this again is doubtful, that there is some turning to the right. The speech is slow and indistinct; swallowing normal. All muscles innervated by the spinal accessory are normal. As regards the muscular system of the head and neck, upper extremities, and chest there is nothing definite to note. In walking she inclines over to her left, explaining that she is afraid of falling to her right. In regard to the sensory system there is an ill-defined hypo-algesia all over the face and taking in the upper two cervical segments. This is not well limited and suggests a 'functional character. All deep reflexes are present, equal, and normal. The plantar reflex on the left side had been thought by a skilled observer who examined her in the out-patient department to be of extensor type. After admission to the hospital it did not present that character upon the occasions when it was tested. The abdominal reflexes are normal and equal. On either side localisation of touch, sense of position, and muscular sense are good, and there is no loss of stereognostic sense; the viscera are normal."

Two days after admission the patient whilst taking her tea told the nurse that she felt ill and then had a fit. When the observer (skilled) arrived she was lying in bed with the head slightly retracted and turned to the left side. She was making irregular movements of flexion of the arms, whilst the legs lay quiet. There was no rigidity. The corneal reflexes were brisk but painful stimuli failed to evoke signs

[1] Medical Times and Gazette, Dec. 23rd, 1876.
[2] Ibid., vol. i., 1879.

of consciousness. There was an internal squint which presently gave way to rolling of the eyes to either side. A quick tremor of the jaws was present but none in the limbs. The pupils were "pin-point." The breathing was irregular and often absent for many seconds, when expiration, with some stertor, took place; the whole suggestive of a person voluntarily holding the breath. The irregular movement of the arms was succeeded for a few seconds by tossing movement of the body and then, for about a minute, the patient became absolutely flaccid all over. This process repeated itself two or three times and then the movements became more violent and the pupils dilated, becoming of normal size and reacting well. During this second stage the patient threw herself into various emotional attitudes, the eyes being cast either upwards or from side to side. The whole aspect in this stage suggested a typical hysterical fit and in the course of half an hour she began to regain consciousness and uttered inarticulate sounds.

For some weeks past this patient has greatly improved in health, has ceased to lurch to the left in walking or to present weakness of the right side of her face. She has had no return of fits for more than a month past. A week or more ago she had, however, to keep her bed for three days on account of bad headache. There has been no return of vomiting since she was admitted. Reserving comment upon this case, let me now relate particulars of another female patient who was admitted into hospital under my care the year before last.

CASE 2.—The patient, a female, aged 21 years, was admitted on Nov. 3rd, 1904. The family and past history were unimportant. The notes of the case were taken by Dr. Gordon M. Holmes, then resident medical officer. Four months previously to admission she began to suffer from an unusual degree of headache, the pain being generally across her forehead, at first equally severe on either side but recently much in the right temporal region, whence it would radiate over the ear to the right occipital region. The pain would not remain constant for long but would come for five minutes or so three or four times a day. The headache had been increasing in frequency and severity. Three months previously she began to suffer also from severe attacks of vomiting which would occur without any gastric exciting cause, and often the first thing in the morning. For the past two years and up to four months previously when the headaches began she had been subject to attacks of vertigo. These usually occurred when she was hurrying about. The room would appear to move around her from right to left and she would feel that she was revolving in her vertical axis in the same direction. She would then fall if unable to catch hold of anything. If in the street she would stagger, generally to the right, and explained that she always felt that there was more support in the right than in the left limbs; she would try to lay hold of anything with her right hand. She did not lose consciousness. Three months previously she began to have attacks of what she describes as "loss of mind," and these would recur perhaps once a week on an average. They would occur suddenly and she could not ascribe them to any cause. At first she felt dazed and as if she had lost herself, and then became unconscious of her surroundings for a few minutes. "My mind," she describes, "seems to go to different places. I see other people and in different rooms. I see them quite distinctly. Once I saw three girls knitting, girls I had never seen before. Once I saw a big room full of people who seemed to be moving about and working. I could not see what they were doing. Again, I have seen a girl sitting alone in a room. The last time I saw three golden pillars standing before me and remaining steadily in the same position. I only saw them for a few moments, then they disappeared and all was blank." She had been told that in some of the attacks she remained perfectly steady, but in a few she had thrown her arms about as though she wished to push something away from her. After the attacks she was very dazed and drowsy. She then fell off to sleep which might last for some hours. Whilst in hospital on more than one occasion she found that on closing her eyes she saw a series of pictures—the sea, the country, a railway train passing in front of her—always coming from her right. For the past two weeks she had frequently had attacks of a dull aching pain and "numbed" feeling beginning in the right shoulder and passing down to the fingers. Then it affected the right thigh and ran down the leg to the toes. Each attack lasted only a few minutes but she might have several in a day. In these attacks the limbs felt useless but did not remain so when the pain ceased. On a few occasions similar sensations had been felt in the limbs on the left side. Since the attacks began she had frequently awakened in the morning with a bad taste in the mouth which might last all day. There was no taste sensation directly associated with the psychical attacks. She often had a singing in the ear but could not say on which side. The sound was as of bells. The memory was becoming bad. The patient appeared to be dull, inattentive, and listless. There was no optic neuritis. On smiling (emotional movement) the left side of the face moved more than the right. This was not observed in voluntary movement. There was nothing abnormal in her gait or muscular system and no subjective or objective changes of sensation were noted. The deep reflexes were normal; the abdominal reflex was greater on the right side than on the left. As regards the plantar reflex there was but little response on the right side but what there was appeared to be of flexor type. The left plantar reflex was typically flexor. On one occasion she saw the place of the beds on the left side of the ward taken by what seemed to be a number of sacks filled with something and tied at the top. She was drowsy for some hours afterwards.

Whilst in hospital she gradually lost the subjective symptoms described and had little or nothing to complain of. A diagnosis of tumour of the right temporo-sphenoidal lobe was made but there being no urgency in her symptoms she was discharged to her own home in March, 1905, and was kept under occasional observation. On admission for the second time on Nov. 3rd, 1905, the following was her condition as noted by Dr. Golla, then resident medical officer. Whilst at home she had had no more of the "dreamy states." She had, however, suffered as often as four or five times a week from what she described as a feeling of dread accompanied by a "creepy" and cold sensation all over the body. When this occurred she felt that she did not know where her body really was and external objects lost to some extent their reality. About two months previously the headaches, which had ceased for several months, began to return with their former severity and were occasionally accompanied by vomiting. During such attacks of headache she noticed dimness of vision in the right eye. A month previously she felt as if the right cheek were tight and contracted. This lasted a short time and was accompanied by a feeling of numbness in the right hand. A week ago she suddenly felt as if the right hand were contracted, the sense of contraction next ascending the arm, and she then felt as if the mouth were drawn over to her right and the tongue, according to her description, "curled up on the right side." Next there was a feeling of tightness over the right malar bone with dimness of sight of the right eye. The feeling of contraction then came in the right leg and in the parts affected there seemed to her to be coldness and numbness. Within a few minutes of the onset of the attack (the patient could not say whether the right-sided sensations had then ceased) she began to experience a precisely similar march of movements and numbness on the left side. She was able to speak and was fully conscious for part of the time. The left-sided attack only differed from that on the right side in that there was no subsequent dimness of vision in the left eye. Two days before admission she had a similar attack, except that on this occasion it was entirely confined to the right side. The headaches during the preceding week had increased in severity and her sight had become worse. She had not had any of the crude sensations of taste complained of during her former stay in hospital. During the attack with the feelings of contracture her mother noticed that her mouth appeared to be drawn to the right.

On admission she was found to be well nourished and quite intelligent. Taste and smell were not keen but could not be said to be defective. Vision: R. = $\frac{6}{12}$; L. = $\frac{6}{12}$. The fields were normal. In the right eye there was well-marked neuritis with + 3 D. of swelling of the disc. In the left eye there was somewhat less swelling. The disc margin was still visible though much obscured. The eyes had been carefully examined by a skilled observer three days before admission when no neuritis was to be seen, though the vessels were perhaps large. As regards the muscular system all movements of the head and neck were equally well performed on either side. All the muscles of the upper extremities were well developed and possessed good tonus. There was no wasting. There was a very slight relative weakness of all movements of the left

upper extremity but on the whole these were well and strongly performed on either side. The thorax moved well and equally on the two sides; so also the abdomen and the lower extremities, which presented no abnormality except that the patient was unable to stand as well on the left leg as on the right. In walking there was some tendency to lurch over to the left side (this was very marked on Nov. 8th). Nothing abnormal could be detected in the sensory system; there was no impairment of localisation of touch and no astereognosis. All deep reflexes were equal and about normal. The abdominal reflex was now found to be *absent on the left* and brisk on the right side. The plantar responses were flexor on either side. As regards her mental condition there was some slowness of cerebration, which was most evident when the patient was asked a question. She herself ascribed this to deafness but it was evident that many things perfectly well heard did not convey any proposition to her till after an abnormally long interval. Her power of reading, writing, and spelling appeared to be normal. There was no evidence of any aphasia. There was no local tenderness produced by pressing upon the cranium. On Nov. 11th it was noted that there was optic neuritis with + 5 D. swelling on either side. On Nov. 13th the patient had been complaining of headache all day. Half an hour after taking tea she was found dead in bed. She must have died without making any movement or sound, as the attention of the patient in the next bed was not attracted to her.

A necropsy was made by Dr. Holmes, director of the Nervous Diseases Research Fund, 18 hours after death, and he has kindly provided me with the following short abstract. On removing the calvarium and dura mater the convolutions and convexities of both hemispheres were found flattened but not diseased. A tumour was found chiefly in the right hippocampal gyrus and evidently grew from there in the base of the brain. This gyrus appeared much enlarged and the tumour projected out as an irregular mass in its inner side, where it had destroyed the greater part of the uncus. From here it had grown into, and filled up, the inferior horn of the lateral ventricle, and projected anteriorly into the body of the ventricle. Its anterior end infiltrated the right nucleus lenticularis, but although it might compress the internal capsule it had not destroyed any part of it. This portion of it extended as far forwards as the anterior commissure. It had compressed and flattened out the right optic tract and the right crus cerebri but had not infiltrated either. Microscopical examination showed that it was a very cellular glioma.

It is in reference especially to the localising value of the associated sensational and psychical phenomena described in these cases that I bring them forward. The psychological bearings of such symptoms have been discussed by Dr. Hughlings Jackson in his papers and especially in a most interesting contribution to "Brain," 1899, Part 4.

I have purposely described first the case of the living patient who is shown (Case 1) because of the doubt which still to a certain extent remains whether her symptoms, which are very similar to those narrated in Case 2 and are certainly strongly suggestive of Dr. Hughlings Jackson's "uncinate group," are likely to be due to the presence of a growth in the hippocampal region or to be referred to simple epileptic discharges beginning in that district. The occurrence of severe headaches, to which the girl had not been previously liable, coupled with attacks of vomiting and followed by fits a few weeks before admission, presented a picture which evidently suggested the presence of coarse intracranial disease. Evidence tending to support this was furnished by the presence of the Babinski plantar response on the left side noted by a trustworthy observer when she was attending the out-patient department. Again, on admission it was thought that there was some facial weakness, especially in the orbicularis palpebrarum, but the value of this symptom was a good deal discounted by the fact that this was on the *right* side whilst the extensor response was on the left. Her fits have had the character of those styled "functional," it is true, but the contraction of the pupils to pin-point size noted by a trustworthy observer seemed to show that this was, at least, probably not the only element in them. The girl at the present time seems to be in very fair health. There is no facial weakness, examination of the plantar reflex fails to evoke any extensor response, and her fits have ceased.

The temptation to look upon her case as one of comparatively little pathological importance would be very strong indeed but for the lesson conveyed in the history of the other patient (Case 2). In the case of this latter, during her first residence in hospital all symptoms of urgency subsided, the immunity continuing for several months after her return home, and yet in the end a relapse occurred; severe optic neuritis rapidly ensued, followed in a few days by very sudden death.

The paroxysmal symptoms (numbness, contracture) described as affecting the right half of the face, right arm, and leg in Case 2—i.e., on the same side as the tumour occupied—were doubtless of indirect origin and due to pressure of the right sided tumour upon the left hemisphere. In the case of the living patient (Case 1) there were also symptoms referred sometimes to one and sometimes to the other half of the body. In all the circumstances it does not seem possible to determine with certainty whether the symptoms of Case 1 are dependent upon progressive coarse disease of the temporo-sphenoidal lobe. In view of the patient's defective mental condition, however, and physical appearance it is more likely perhaps that the symptoms are due to some imperfection of development in this region.

In Case 2 it will be noted that the plantar reflex of the left side was of distinctly flexor type whilst the abdominal reflex of that side, which was decidedly less than on the right at the time of her first admission, was found to be absent when she came for the second time into hospital. In 1879 attention was called by Rosenbach to the fact that in hemiplegia the abdominal reflex may be expected to be found either weakened or absent on the paralysed side, and this observation has since been amply confirmed by succeeding observers. I am informed by past and present resident medical officers of this hospital that it is common for them to find in cases of intracranial tumour causing hemiplegia a diminution or absence of the abdominal reflex on the hemiplegic side some time before the plantar reflex of that side shows the extensor type. This alteration of the abdominal reflex, they tell me, may occur when other symptoms of hemiplegia are only very doubtfully present. The observation is a very important one but it is yet too early, I think, to say whether the symptom can be looked upon as quite constant. (The abdominal reflex in Case 1 is well marked and equal on the two sides.)

It will have been noted that in each of the hospital cases mention is made of a subjective sensation of taste, not of smell. There is such a close physiological relation between these two special senses that it is not safe to conclude that disturbance of the gustatory sense was not associated with what is described as "smell." According to Alfred Campbell,[3] histology supports comparative anatomy in suggesting that in the human brain the lobus pyriformis (which consists of the external root of the olfactory lobe combined with the gyrus hippocampi) must be regarded as the principal cortical centre, although not the sole one, governing the olfactory sense. "Clinico-pathologists, experimenters, and comparative anatomists," he writes, "have all in turn attempted to decide the functions of the various parts included in Broca's limbic lobe, and the broad results to be gathered from their researches collectively are that certain parts of the lobe preside over the functions of taste and smell, but it is still a debateable matter what parts exactly dominate the sense of smell, and as to the location of the gustatory function the knowledge we possess is even less secure." Whatever may be the case as to the exact location of centres for smell and taste clinical evidence of their seat in the uncinate region or its immediate neighbourhood abounds.

The following case which was seen by me in private practice some time ago has an important bearing on those which I have related. A medical man, aged 60 years, who consulted me in October, 1902, complained that in the preceding August he had been wakened by "a horrible clang of a piano." This was a purely subjective sensation. He felt faint and lay down. After two days a similar attack occurred. He took some bromide and was free from trouble till October, when similar sensations recurred and were then accompanied by a very disagreeable smell in the nostrils which lasted a minute and was repeated in the afternoon. Altogether he had had six of such seizures when I saw him and they had begun to be associated with an indescribable feeling that "all this had happened before." (This was not a simple reference to the fact of repetition of the attack.) He

[3] Histological Studies on the Localisation of Cerebral Function, Cambridge University Press, 1905.

had never lost consciousness. At that time careful examination failed to show any objective signs of coarse intracranial disease. Under bromide and salicylates his attacks ceased and he continued his practice. A little later he went abroad for a holiday which he much enjoyed. In the following year he gradually became partially hemiplegic on the left side and had, in addition, left hemianopia with Wernicke's sign, and other symptoms of intracranial tumour also developed. Eventually he was operated upon by Sir Victor Horsley and an infiltrating glioma was found in the base of the right temporo-sphenoidal lobe. Death followed two or three weeks afterwards. No necropsy was permitted.

The late Dr. James Anderson published in *Brain*, Part 35, a case of basal cerebral tumour affecting the left temporo-sphenoidal lobe and giving rise to a paroxysmal taste sensation and "dreamy state." In the case of epilepsy to which I have already referred, which was published by Dr. Jackson and Dr. Colman in *Brain* in 1898, with at least some of the seizures there were certain movements of the mouth and tongue—tasting movements. These were, Dr. Jackson supposed, the indirect "reflex" results of an epileptic discharge beginning in elements of the taste region of Ferrier. The patient had that variety of the "dreamy state" which Dr. Jackson has called "reminiscence." In his slight attacks there was a sentence in his mind which seemed as if well remembered. If anyone were at the time speaking to him it would be as if he were trying to remember it—as if it were familiar—but yet he could not remember it. He could not, on recovery, say what the "interesting matter" was. He had a slight feeling of dread. It was not a fear of the fit; the dread came first, and then the fit, or rather the rest of the fit. There was no evidence of any crude sensation warning of smell, taste, hearing, or sight. At the necropsy Dr. Colman found a very small lesion of the left uncinate gyrus.

SUBMUCOUS EXCISION OF DEVIATIONS AND SPURS OF THE NASAL SEPTUM,

WITH A REPORT OF 30 OPERATIONS.[1]

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IT is generally agreed that operations on the nasal septum have not been amongst the most satisfactory in rhinology.[2] Occasionally a limited spur may be chiselled or sawn through, or a ledge on an undeviated septum may be shaved off, and symptoms are thus relieved. A deviation, limited entirely to the cartilaginous septum, is sometimes met with, with no concomitant spur on it. Then a crucial incision at the most convex point, or a U-shaped incision made around it, will allow of the parts being moulded into the middle line, so as to free the obstructed nostril. But the cases suitable for these operations form a minority amongst the abnormalities of the septum which require treatment.

Deviations of the septum are only too frequently sigmoid in shape—either in the vertical or horizontal plane—so as to cause some obstruction in both nostrils, and in the majority of cases part of the bony septum has to be removed (Krieg, 52·3 per cent.; Boenninghaus, 68 per cent.). The septum, in fact, is too large for the space available for it between the floor and the roof of the nose, and one of our greatest difficulties has been its resiliency, which even the operations of Asch and Moure have only partly overcome. A simple deviation of the cartilage, or an uncomplicated spur, is much less frequently met with than various combinations of the two. These cases have proved a *bête noire* to rhinologists and in the most marked forms (i.e., with more or less complete obstruction of one nostril) we have hitherto had no operation which could satisfactorily correct them.

Design of the operation.—I do not at present intend to discuss the varieties of septal deformities, or the indications for operative treatment, but propose to describe an operation which can be warmly recommended as entirely satisfactory for even the most marked deformities. The design of this operation is to excise all obstructing cartilage and bone, with any projecting spurs or ledges, while preserving intact the mucous membrane on each side. The results, both immediate and remote, are all that could be desired; for the resiliency of the deformity is entirely overcome, the obstructing outgrowth can never re-form, the patency secured exceeds that obtainable by any other proceeding, scabbing or crusting of discharge is avoided, and the preservation of the mucosa on each side secures rapid return to a normal condition.

Preparation.—The patient should be prepared by avoiding alcohol and any excess of diet or tobacco for three days beforehand. The operation is done under local anæsthesia but an aperient should be given the evening beforehand. These precautions greatly help to avoid any bleeding during the delicate operation to be described. The patient can have an ordinary meal (breakfast or lunch) just beforehand. The vestibules—the only really septic parts of the nasal chambers[3]—are cleansed with spirit soap and if a moustache is present it should be thoroughly washed.

Anæsthesia.—Inch-wide strips of sterilised ribbon gauze are soaked in adrenalin chloride containing 10 per cent. of cocaine and applied along the septum on each side, tucking them well up towards the roof of the nose in front and down to the floor. It may be impossible to get the gauze far in on the obstructed side at first, but after a few minutes the anæsthetic and vaso-constrictor action of the mixture will generally allow of a fresh piece being introduced more deeply. It is important to wait at least 15 or 20 minutes to secure complete analgesia and full hæmostatic effect. If then the anterior end of the septum is still found to be sensitive a pledget of cotton-wool soaked in 20 per cent. cocaine should be applied for another five minutes, or some powdered hydrochlorate of cocaine may be applied on a minute damp swab. When the septum is found to be blanched and insensitive a fresh piece of soaked gauze is left along the concave side, while a small portion of dry gauze is packed along the floor of the opposite side to collect any drops of blood which may run backwards. Small pledgets of gauze or cotton-wool should be at hand for mopping the wound, and a couple of retractors may be useful in holding open the nostril.

Position.—The operation is best done with the patient horizontal on a couch or operating table, with the head and shoulders well raised. The surgeon is armed with a Kirstein electric head-lamp or a frontal searchlight, although he can also operate successfully with an ordinary forehead reflector.

First incision.—Tilting up the end of the nose with the thumb of the left hand, and inserting the left forefinger into the patent nostril, an incision is made through the mucous membrane of the septum on the convex (the obstructed) side. It may be made with an ordinary bistoury but a much shorter instrument mounted on a bayonet handle and cutting all round the point will be found more satisfactory. The incision lies half a centimetre behind the junction of the skin and mucous membrane, and mainly parallel to the septum cutaneum, but it may have to curve away from it at each extremity. It should be started near the floor and then be carried high up well into the attic of the nose. This incision, in its whole extent, does not only cut through the mucous membrane and perichondrium but should go deep enough to cut into the cartilage. With practice this incision can be carried through the muco-perichondrium and the entire thickness of the quadrilateral cartilage at one cut, but without puncturing or wounding the mucosa of the opposite (concave) side. During the proceeding the operator's left forefinger serves as a useful guide and check by feeling the rounded tip of the knife as soon as it has traversed the cartilage (Fig. 1). In those cases where the lower end of the quadrilateral cartilage is displaced from behind the septum cutaneum into one of the

[1] A paper read before the Royal Medical and Chirurgical Society on June 26th, 1906.

[2] "That many spurs have been removed unreservedly and without benefit to the patient is apparent to any careful observer connected with a large clinic where such results come to his knowledge. Not only am I warranted in saying that in many instances no good has obtained from their removal, but would further affirm that absolute harm has been done by creating a dry, 'scabby' condition of the septum, which is a constant source of irritation to the patient." (Harmon Smith, The International Journal of Surgery, December, 1904.)

[3] StClair Thomson and R. T. Hewlett: The Fate of Micro-Organisms in Inspired Air, THE LANCET, Jan. 11th, 1896, p. 86; Micro-Organisms in the Healthy Nose, Transactions of the Royal Medical and Chirurgical Society, vol. lxxviii.

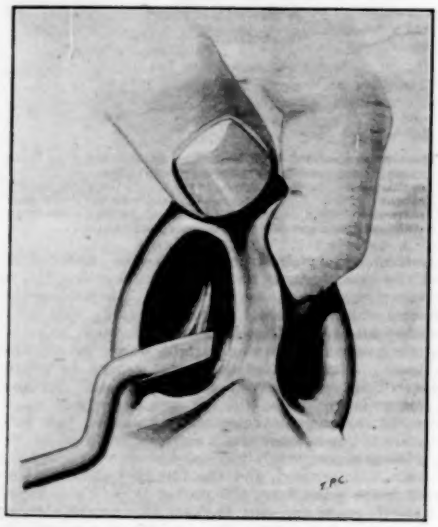
nostrils—which it more or less blocks—the incision is made directly over the exposed extremity. If this extremity presents in the open (concave) nostril the septum cutaneum is first tilted across it, so that the cut can still be made from the convex surface. If this is impossible the projecting cartilage must be dealt with through a separate incision from the concave side (Cases 28 and 30). Afterwards the procedure is the same.

Raising the convex flap.—With a sharp elevator the muco-perichondrium is carefully separated and raised along the posterior edge of the incision. Difficulty arises if the raspatory passes in between the mucous membrane and the perichopdrium instead of completely underneath the latter. Once freed along its whole length a dull edged detacher is used and if a good start has been made it is very easy to separate the muco-perichondrium clearly away from the cartilage. The dead white, slightly roughened surface of the latter should be distinctly visible and should not be coated with any soft, smooth, or pinkish perichondrium. The stripping up of the convex surface is carried upwards and backwards—where it is easily reflected—as well as downwards, where progress is apt to be arrested by its close adhesion to a cartilaginous spine or bony ledge. If possible, the limits of the convexity should be well passed.

Incision through the septal cartilage.—The next step is to cut through the cartilage at the site of the incision, but without incising the mucous membrane of the concave side. If the cartilage has not already been completely cut through, it will, at least, have been scored with the bayonet-knife in the original incision. The rounded tip of the knife is inserted into this groove and worked to and fro, taking great care not to button-hole the mucous membrane on the concave side. The tip of the left forefinger in the opposite nostril assists by feeling the end of the knife as soon as it has traversed the cartilage. The latter is thus cut through in the same extent as the first incision.

Raising the concave flap.—The sharp elevator is now introduced from the convex side, through the incision in the cartilage, and insinuated between it and the muco-perichondrium lining the concavity. Once started, the operator takes the dull-edged separator, and by carefully hugging the septum all the time, and observing the same

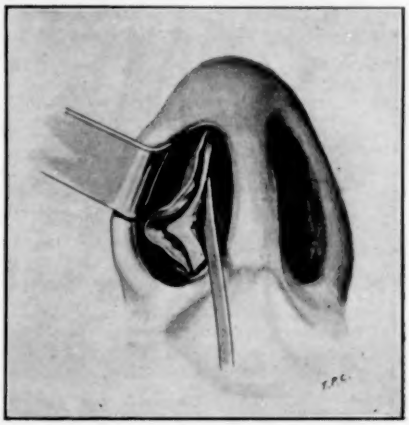
FIG. 1.



Making the incision from the convex side while the forefinger of the left hand acts as guard in the opposite nostril.

precautions as in raising the convex flap, the membrane lining the concavity can be completely undermined (Fig. 2) But the most troublesome moment is when we reach the depth of the concavity, especially in those cases where a sudden hollow with steep edges is encountered, a condition which I can best describe by comparing it to the inside of a saddle. To avoid a button-hole at this point a good plan is first to free the mucous membrane well above and below it. If a puncture does occur it is better not to go on working at that spot but to leave it until separation has taken place all round it. The point of the instrument can be watched as it manœuvres below the mucosa in the concavity. The separation is carried on until the membrane has

FIG. 2.



The muco-perichondrium has been raised from the convex side of the septum and the cartilage has been cut through. The blunt detacher is shown separating the mucous membrane from the concavity of the deflection.

been stripped up all over the concavity and also over any secondary convexity if the deviation is sigmoid-shaped.

Excision of the septal cartilage.—The deviated and denuded septum is now exposed in a pocket whose walls are formed by the detached mucous membrane on each side and whose mouth opens into the obstructed nostril. The next step is to excise the deviated portion through this opening. The field of operation can be well exposed by the help of Killian's long nasal speculum. We are so accustomed in this country to Thudichum's speculum that I have had one made with blades two inches long to serve the same purpose. Used through the obstructed nostril a blade is inserted on each side of the denuded septum, between it and the separated muco-perichondrium (Fig. 3). With a good electric searchlight it is easy to see if the mucous membrane on each side has been sufficiently stripped off. If not, we must return to the raspatory. I have never had to regret removing too much of the septum, and it is much better, if possible, to separate the mucous membrane as far as will be required before commencing the excision of the septum. This can be done with a stout pair of narrow scissors, such as Heymann's, supplemented by punch forceps. But this part of the operation is quickly, safely, and completely carried out by using Ballenger's swivel septum knife.[4] This is placed astride the anterior cut surface of the cartilage, pushed upwards and backwards below the roof of the nose, until it comes in contact with the ethmoid; then the cutting surface is directed downwards and backwards to the angle between the perpendicular plate of the ethmoid and the vomer; and, finally, it is pulled forwards along the upper margin of the vomer (Fig. 4). The excised cartilage is lifted out. In this way the main part of the deviation is removed *en bloc*. Some of the pieces thus removed measure one inch by one and a half inches. The empty pocket between the two separated and flaccid mucous membranes is now wiped free of any blood in it, and the two sides are allowed to fall together—mucous membrane with mucous membrane. This should hang perfectly plumb in the middle line, and on looking into the formerly obstructed nostril one can see the previously invisible middle turbinal, the whole length of the inferior turbinal (often ill-developed from pressure), the anterior wall of the sphenoidal sinus, the levator palati muscle, and the posterior wall of the

[4] The Laryngoscope, vol. xv., June, 1905, No. 5, p. 417.

naso-pharynx. If this view is not quite free, or if any projection is still seen on the septum, the two mucosæ are again separated by the long nasal speculum, and more of the septum is shaved off with Ballenger's septum knife or Ingals's cartilage knife or clipped away with punch

FIG. 3.

Semi-diagrammatic transverse section of nose viewed from above. The deviated septum has been divided in front and its muco-perichondrium has been stripped up on either side. The nasal speculum is introduced through the convex nostril and a blade is inserted on each side of the septum, between it and its mucous coverings.

forceps (Fig. 5). In doing this portions of the vomer and of the perpendicular plate of the ethmoid are removed. (A specimen was shown in which more than 40 bits were thus clipped away, even after a bony spur and a large piece of cartilage had been excised.) It is well to remember that

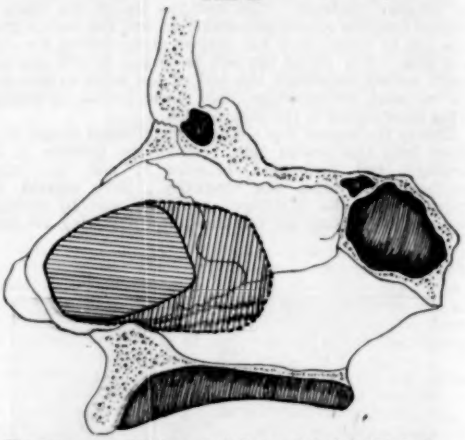
FIG. 4.

The method of employing Ballenger's swivel septum knife for cutting out the cartilaginous deviation.

the fleshy curtain will hang between the upper and lower margins of the gap left in the septum. These margins, therefore, must both be in the middle line, otherwise the membranous septum stretched between them will be oblique or to one side (Fig. 6).

Excision of bony spurs and deviations.—If, as is only too often the case, the deviation is accompanied by a bony spur or ledge the operation is started as already described. Much difficulty is encountered in raising the mucosa from an acute, prominent spine, especially if it presses into the opposite inferior turbinal. Killian says that "whoever attempts to separate the mucosa around these corners will perforate as a rule." It is also frequently a very tedious matter to lay bare any thickening or deviation of the nasal process of the superior maxilla or the chondro-vomerine articulation—the usual sites of bony obstructions. Here the periosteum is not only intimately adherent but also coats over the bone between it and the nasal quadrilateral cartilage. In such case freer access is obtained after the removal of the cartilaginous deviation. Once well exposed the maxillary spine is attacked with strong punch forceps or chisel, and as pieces of it are prised up they are twisted off with forceps. A bony spur on the vomer has sometimes to be followed back nearly to the posterior choana (Case 21), and the vomer is often so curved over into the obstructed nostril that it lies parallel and close to the floor of the nose. A great deal of the success of an operation depends on the complete removal of these spurs and ledges of bone, and this part of the operation in many instances is both the most necessary and the most difficult. Not infrequently the removal of part of the quadrilateral cartilage is little

FIG. 5.



The area surrounded by a dark line and shaded with horizontal lines indicates the size and situation of the cartilaginous deviation removed with Ballenger's swivel septum knife. The area shaded with vertical lines and surrounded by a dotted line consists of cartilage and bone which are removed with punch forceps and chisel.

more than the preliminary step to the main object in view. Success depends on carefully separating the muco-periosteum from the maxillary spine (if prominent) and then removing the latter so as to bring any vomerine deformity into view. The perichondrium must be separated from each side of the vomer right down to the floor of the nose. Deformities of the vomer ascend as the deeper regions of the nasal cavity are reached and, fortunately, the vomer is apt to be thinner just below any exostosis. Hence, if the bone is chiselled or punched just below a projection, it is at once freed and can be lifted or twisted out. When a completely vertical and smooth fleshy septum has been thus secured, and the formerly obstructed nostril is seen to be quite free, the pocket is carefully wiped out with sterile gauze and care is taken that no chips of bone or cartilage are left in between the two flaccid mucosæ.

Stitching the wound.—The original wound is now closed with one or two stitches. A very small Trélat needle is armed with finest cleft-palate silk (No. 000), and while an assistant holds the nostril open with a retractor the edge of the posterior flap is seized with a small pair of dissecting or toothed forceps and then traversed with the threaded needle from behind forwards. The needle is carried in the same way through the anterior edge of the wound, one end of the silk is pulled out with a fine hook, the needle is then withdrawn, carrying the other end, and the stitch is tied. Care,

of course, is taken that the edges of the wound are properly affronted. One or two stitches may be required.

The dressing.—The formerly obstructed nostril is now lightly packed with pencils of dry sterilised cotton-wool well smeared with simple vaseline. One or two plugs in the opposite side may be introduced. The nose should not be plugged tightly, our object being simply to keep the two mucous membranes in apposition. In some cases I have done without any plug (Nos. 3, 4, 9, 10, 11, and 14).

After-treatment.—The patient rests quietly for the remainder of the day, sips some iced drink, and keeps an iced cloth across the bridge of the nose. A little blood-stained oozing is best met by ice-water ablution to the face and neck. I have never had any secondary bleeding requiring attention. Cotton-wool, dipped in cold boric lotion, is used for wiping out the blood which dries in the vibrissæ and causes discomfort to the patient. Next day the plugs are partly or entirely removed and a smaller one may be left for another 24 hours. The patient can go out or resume his work. The septum may look somewhat swollen and the nose be more or less obstructed for a few days. During this time he must not blow his nose, but should suck any blood-stained mucus backwards into the nasal pharynx and then hawk it up. Relief from the obstruction can be obtained by spraying the nose with liquid vaseline or by introducing a piece of menthol and boric ointment into each nostril morning and evening. At the end of three or four days the swelling of the fleshy septum subsides and the stitches are removed. In from seven to ten days the patient begins to enjoy the benefit of the operation, but it is often only after three weeks that the full advantage of it is established.

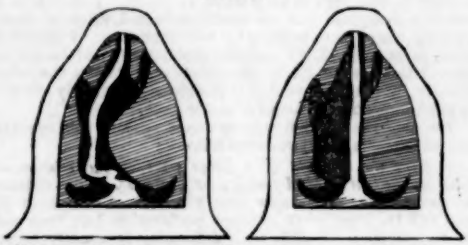
After-condition.—It is frequently asked if cartilage is re-formed between the two mucous flaps. Two of my cases (Nos. 2 and 3), which were operated on two and a half years ago, have recently been examined, and although some solidification has taken place in the fleshy septum it is still seen to quiver like the sail of a boat when the patient sniffs quickly through one nostril. K. M. Menzel was able to submit a piece of the fleshy septum to histological examination two and a half months after the quadrilateral cartilage had been resected.[5] Both flaps of mucous membrane were intact and united together by connective tissue but there was no trace of re-formation of cartilage. This is what we would expect from the researches of Paget on the processes of repair.[6] He pointed out that there are no instances in which a lost portion of cartilage has been restored, or a wounded portion repaired, with new and well-formed permanent cartilage. Even the preservation of the perichondrium does not secure the re-formation of cartilage, as is shown by a case of wounded thyroid cartilage which Paget examined several years after complete healing. A layer of tough fibrous tissue united the gap, but there was no appearance of a renewed growth of cartilage. Similar results were arrived at by Redfern in incised wounds of the articular cartilages of dogs.[7] Paget points out that in membraniform cartilages which have a perichondrium the healing process is probably in some measure modified, a reparative material being furnished, at least in part, from the perichondrial vessels. Hence the importance, in this operation, of carefully preserving the perichondrium, not only in facilitating the technique, but also in contributing to a firmer, fibrous, fleshy septum. Occasionally, while delighted with the free air-way through the formerly obstructed nostril, the patient complains that the side which used to be his best is no longer so free. This is due to the fact that compensatory hypertrophy of the inferior turbinal had taken place in the only acting nostril. When the formerly concave septum is rendered vertical, the passage is proportionately narrowed (Fig. 6). This can be corrected subsequently by removing some of the redundant turbinal.

Some of the difficulties likely to be met with may be referred to briefly.

Insufficient illumination is a difficulty that can be provided against.

Anæsthesia.—Many operators advise a submucous injection of cocaine and adrenalin. Killian employs four drops of adrenalin in two cubic centimetres of a ½ per cent. solution of cocaine. One cubic centimetre of this is used on each side and 15 minutes are allowed to elapse to secure its full effect.[8] I have found that the making of this injection is likely to unnerve the patient; it gives rise to palpitations and uncomfortable sensations, and it often starts a little troublesome bleeding at the point of injection. If the cocaine and adrenalin are applied to the surface, as I have described, the operation is remarkably painless. Although the procedure is naturally uncomfortable it is not more so than a prolonged dental treatment, and most patients have expressed more sympathy for the strain on the operator than complaint for themselves. In an uncomplicated deviation there is no pain. The disagreeable cases are those in which a bony ledge has to be chiselled out a long way backwards; the pain of clipping and twisting out pieces of bone cannot be quite deadened with cocaine. Only two patients complained of the pain; they were very nervous subjects. All the others agreed that it was trifling or entirely absent and that they only regretted their unnecessary fears of anticipation. Five cases were operated on under chloroform. Four of these were the first I performed before I had sufficient confidence in the effect of local anæsthesia. The fifth case (No. 18) insisted on chloroform.

FIG. 6.



Diagrammatic transverse section of the nose showing the compensatory hypertrophy of the left inferior turbinal in the unobstructed nostril. Part of this frequently requires removal after the septum has been straightened.

Hæmorrhage presents no difficulty. In some cases only a few drops of blood are lost, and in none did any run backwards into the pharynx during the operation.

The incision.—In one case I tried the incision from the concave side, but found it so much more difficult that I abandoned it. The one incision is sufficient. In a few cases, with very sharp, low-lying spurs, I have found that I had, involuntarily, carried the lower extremity horizontally backwards, so as to resemble an "L" facing backwards.

Raising the perichondrium.—The importance of this has been referred to. In two cases (Nos. 25 and 29), as shown by specimens, I found I had separated the mucous membrane, but left the thin white perichondrium attached. No puncture was made and no harm resulted, but it is important to avoid this difficulty.

Avoiding perforations.—This difficulty is avoided if one muco-perichondrium can be raised intact. Even if both flaps are punctured a perforation only occurs when the openings are *vis-à-vis*. Although undesirable a perforation causes no annoyance if it occurs far back. I find that the margins are smoothly healed, and no crusting takes place in them. It is more important to avoid a perforation anteriorly, where dust is likely to keep up irritation. Hence the care requisite in cutting through the cartilage and the advantage of stitches if the concave flap should happen to get button-holed.

Removing the septum.—This has been greatly facilitated since employing Ballenger's swivel knife. It is helpful to remember that the quadrilateral cartilage is very thin in front, but that it may be as much as five millimetres in thickness far back. The perpendicular plate of the ethmoid is as thin as paper and very brittle. The vomer is likely to be thickest at its junction with the quadrilateral cartilage. The nasal maxillary spine is not only very stout but it bleeds readily.

Previous operations.—These may greatly increase the difficulties. In one case (No. 16) an adhesion between the convexity and the inferior turbinal left by treatment had first to be separated, and then, in undermining the flap on that side, I found that the cartilage had been quite cut

[5] Archiv für Laryngologie, Band xv., 1904, S. 54.
[6] Lectures on Surgical Pathology, London, 1863, p. 195.
[7] Abnormal Nutrition in Articular Cartilages, Edinburgh, 1850. On the Healing of Wounds in Articular Cartilages, Monthly Journal of Medical Science, September, 1851.
[8] Archiv für Laryngologie, Band xvi., S. 362.

through in one point by a previous operation. Although the mucous membranes of the opposite sides of the septum were stuck together in this area I succeeded in separating them. In another case (No. 19) where the same complication had been left the mucous membrane of the convexity was torn in separating it from that of the concavity (the intervening cartilage having been "shaved off" in previous treatment). No perforation was left but the healing was delayed by scab-formation.

Stitches.—In my earlier cases much time was spent over the stitches, and I experimented with various needles and needle-holders before adopting the one recommended. Some operators have abandoned stitches owing to the time and trouble entailed, the tendency to tear the flaps, and because a plug is sufficient to keep them in place. I find that the stitches described can be readily inserted, allow of lighter packing, and secure healing by first intention. I have tried some cases (Nos. 2, 19, and 20) without any and found that granulations were likely to spring up between the edges. Finally, if the concave flap is punctured anteriorly stitching is most important to avoid a button-hole.

The objections which may be raised against this operation can be stated and answered as follows:

1. *That the excision of a large part of the septum may lead to flattening or deformity of the nose.*—This objection is groundless. We know that the end of the nose does not fall in, even when a large perforation has been made in the septum. Saddle nose deformity is usually brought about by the retraction of inflammatory scar-tissue (generally syphilitic or after external traumatism) or when the whole septum is destroyed. In the above operation a strip of the septal cartilage is always left above, beneath the crest of the nose, and generally another strip below behind the septum cutaneum. It is because of this that the method is called in Germany the *Fensterresektion*. A "window" is taken out of the cartilaginous and bony septum but the window-frame all round is left intact. Even this is not necessary, for the cartilaginous septum was removed in several of my cases (Nos. 8, 17, 18, 20, 21, 28, and 30) right down to its free border, and yet the tip of the nose has not collapsed. Indeed, this operation is quite the best for the deformity known as "displacement of the septum into one nostril." In a girl, aged 15 years, in whom the operation was done in December, 1904, there is now no external disfigurement. On the contrary, the external appearance of the nose is always improved by the operation. It is difficult to show this in photographs, as an improvement in appearance often depends on very slight alterations, but all my patients are satisfied that the appearance of the nose has been altered for the better. Finally, there is the convincing proof that in none of my 30 cases has there been any falling-in or disfigurement, although two of them were operated on two and a half years ago.

2. *That the operation entails greater risks from any subsequent blow on the nose.*—This objection has been met by the experience of Otto T. Freer in four of his cases where severe blows, causing epistaxis and occurring even within a week of operation, did not result in any damage to the fleshy septum or to the external appearance of the nose.[9]

3. *That the operation is long and tedious.*—In cases limited to the cartilage, the deviation can be excised and the operation completed in 20 minutes. But when bony spurs and ledges are met with most writers agree that we require an hour and most of them vaguely add "and even more."[10] In my earlier cases I have spent three hours over the operation but now less than half that time is sufficient. Time is often taken up in waiting for fresh applications of cocaine and adrenalin to act, and the operation is prolonged if one flap happens to be button-holed. It is highly important not to get two button-holes *vis à vis*, as a permanent perforation is then inevitable. If one mucosa is separated intact we can proceed more boldly and quickly with the other. Besides, it is well to remember that "les opérations succédent d'autant mieux qu'elles sont moins nécessaires."

This operation is specially suitable for forms of septal deformity which are the most severe and therefore the most in want of operation. Some surgeons may snatch a fleeting reputation for celerity by treating the slight cases only. I began by reserving this operation for very bad cases, and in view of the satisfactory results have lately extended it to the milder one. Beginners are also apt to be content with an incomplete operation, one which simply frees the obstructed nostril. But when the shrinkage of the soft parts induced by the cocaine has passed off it will be found that the patency is never so good as at the time of operation; and the results are unsatisfactory unless all obstructions are completely removed so as to leave a straight passage open right back to the naso-pharynx and from the olfactory cleft above to the floor of the nose below. Incompleteness of removal must not be sacrificed to rapidity, particularly in this operation, for it would be extremely difficult, and in some cases quite impossible, to separate the two mucous membranes at a later period for further treatment.

4. *That the operation requires special skill.*—The technique is a little difficult to acquire.[11] Perforations appear to be inevitable in the earlier cases of everyone. Thus Freer had six in his first 15 cases but only five in his last 101. Perforations occurred in four of my first seven patients. 26 cases have now been completed without this drawback. This illustrates the progress made by practice. Writers are agreed that the operation is not a simple one. Thus, in one of the latest text-books, Zarniko writes: "As all operators who know it will confess, the *Fensterresektion* of the septum belongs to the most extremely difficult intranasal operations."[12] Both celerity and certainty are secured by practice, and the method and instruments I now recommend have made the operation considerably simpler, so that this objection is one that will have less force as the operation evolves further.

5. *The operation is unsuitable for children.*—From my own experience I would say that it is not a suitable operation for children or young people much under 17 years. Before that age the nasal chambers are so small that the technical difficulties are greatly increased, and it is possible, though not very likely, that it might prevent the full development of the nose. Besides, it would have to be carried out under a general anæsthetic. Killian advises that, as a general rule, children younger than 12 years are not fit subjects for this operation. Otto T. Freer, however, is of opinion that the operation is proper for children at all ages, although with them the deformity tends to recur unless every vestige of it has been removed. E. Mueller has performed the operation successfully in three children under ten years; one of them, indeed, was only six years old.[13]

6. *The armamentarium is large and expensive.*—This was an undeniable objection when I first practised this operation. Freer's complete outfit contains over 20 instruments. Killian's has the objection that different instruments are required for the right and for the left nostril. By combining the good points in the instruments of various operators I have been able to reduce and simplify those absolutely necessary. Those I advise all act in a straight line, which allows of finer and more accurate work than those fitted with a shank at the so-called "nasal angle." They can be used on either side of the septum.

Doubtless in time further improvements will be made and will greatly help in popularising the operation. At present my list of instruments is as follows: (1) an ordinary Thudichum nasal speculum; (2) a long Thudichum nasal speculum; (3) a sharp bayonet-handled knife, cutting for a quarter of an inch all round the point, for dividing the mucous membrane and quadrilateral cartilage; (4 and 5) sharp and dull-edged separators (I agree with Freer that these should be thin-edged and narrow so as to work round sharp angles and into deep concavities); (6) Ballenger's swivel cartilage knife; (7) Hartmann's punch forceps with solid male blade; (8 and 9) a hammer and a chisel; (10 and 11) a needle and a fine hook; and (12) Freer's or Jansen-Middelton forceps.

The *advantages* of this operation may be summarised as follows: (1) no general anæsthetic is required; (2) no hæmorrhage results; (3) there is absence of pain and of

[9] Annals of Otology, Rhinology, and Laryngology, June, 1905.

[10] "The average time for my operation is at least three-quarters of an hour to an hour," Otto T. Freer, Annals of Otology, June, 1905. "The one and one half hours required," Leon E. White, Boston Medical and Surgical Journal, April 21st, 1904. "When bone needs removal the operation is long, from one to two hours," A. Coolidge, jun., Boston Medical and Surgical Journal, Feb. 2nd, 1905. "The operation may take as long as two and a half hours," Felix Cohn, The Laryngoscope, vol. xiv., July, 1904, p. 556. "The operation lasts from one to three and a half hours," Stepanov, Revue Hebdomadaire de Laryngologie, vol. xxv., 1904, ii., No. 31, p. 143.

[11] "In submucous resection ..... *a great deal more technical skill and dexterity* are demanded, which many who treat the nose will probably never have the patience to acquire," L. H. Pegler, Brit. Med. Jour. Nov. 4th, 1905, p. 1202.

[12] Die Krankheiten der Nase, 1905, p. 300.

[13] Archiv für Laryngologie, Band xv., 1904, S. 312.

shock; (4) there is no reaction (the post-operative temperature seldom rises above 99° F.); (5) there is absence of sepsis, with its possible extension to the ears, the sinuses, or the cranial cavity; (6) no splints are required and no plugs after 48 hours; (7) rapid healing takes place, without crust formation; (8) there is no risk of troublesome adhesions; (9) the after-treatment is of short duration; (10) there is speedy establishment of nasal respiration; (11) it is suitable for all deformities of cartilage or bone in the septum requiring treatment; (12) the space gained is not only that resulting from a vertical septum, but the extra room secured by removal of the cartilage, which is sometimes one-eighth of an inch in thickness; (13) no ciliated epithelium is sacrificed; (14) accuracy of result can be depended on and the prognosis is, therefore, the more definite; and (15) improved appearance of the nose externally.

The *contra-indications* of submucous resections are: (1) elderly people are so accustomed to their nasal obstruction, and its secondary consequences are generally so fully established, that the benefits would be much less marked than earlier in life; (2) the question of its indication for children has been considered under the section of "Objections"; (3) serious or progressive organic disease (this does not apply to healed tuberculosis—in Case 11 the patient had been advised to consult me after leaving a sanatorium and the operation was performed ten months ago, the result being entirely satisfactory, and lately the patient reported that he was keeping well and free from symptoms); (4) active syphilis; (5) lupus (a patient with healed lupus of the larynx had a marked deviation into one nostril and displacement of the lower end of the cartilage into the opposite, and her name was put on my waiting-list of patients, but when admitted a few months later apple-jelly infiltration had commenced on each side of the septum and the operation was therefore cancelled); and (6) the operation should be postponed if the patient shows any symptoms of influenza or acute or infectious catarrh.

The *special indications* of this operation would appear to be: (1) cases where it is desirable to establish normal nasal respiration and to remove mouth-breathing, with its numerous consequences; (2) correction of the disfigurement caused by the lower end of the quadrilateral cartilage projecting into one nostril; (3) the cure of reflex neuroses of the nasal organ; (4) the relief of Eustachian catarrh; and (5) the facility of treating nasal polypi and affections of the accessory sinuses. In two cases (Nos. 2 and 3) the polypi could not be attacked until the septum had been straightened and in one of these the ethmoidal labyrinth required free removal. As in this operation a deviation can be followed high into the roof of the nose it is particularly indicated when drainage or treatment of the frontal or anterior ethmoidal cavities is required (Case 25).

History of the operation.—It is difficult to settle the paternity of this operation. An entire article on this point has recently been contributed by Suckstorff, who traces the principles of it back to Heylen in 1847.[14] For those who wish to refer to the matter I have added in an appendix some of the bibliography. As at first designed the mucous membrane on one side was removed together with the septal deformity, leaving only the mucosa of the opposite side to act as a septum. This entailed a long convalescence, during which crusts formed and required careful attention. When healed the surface did not leave the even, moist, slippery surface secured by the present method. As I have described it the operation is in most respects similar to the one carried out by Killian.[15]

Conclusion.—The increasing satisfaction with this operation, which has come with extended practice, has encouraged me to prefer it in the majority of septal deformities calling for interference. It is possible in some cases to avoid operation on the septum by directing attention to other points in the nose. For spurs and ledges in a more or less vertical septum—a rare condition—this operation is unnecessary. Deviations, if limited to the cartilaginous septum, may be partially corrected by the more easily executed operations of Asch and Moure.[16] But for all other forms of deviation, and for combinations of spurs with deviations, the operation above described will be found the most satisfactory.

[14] Archiv für Laryngologie, Band xvi., 1904, S. 355.

[15] Archiv für Laryngologie, Band xvi., 1904, S. 362.

[16] "Few, if any, of the Asch operations result in a perfectly smooth outline of the septal surface and in quite a number of instances subsequent operation for the removal of spurs or spines is necessary," Harmon Smith, The International Journal of Surgery, December, 1904.

(A report of the first 30 cases operated on was appended to the paper.)

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EPIDEMIC CEREBRO-SPINAL MENINGITIS, WITH NOTES ON RECENT CASES OCCURRING IN GLASGOW.

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CEREBRO-SPINAL meningitis, known also as cerebro-spinal fever, spotted fever (a misleading term as spots are infrequent), and by other names such as idiopathic suppurative meningitis, basal meningitis, and simple posterior basic meningitis of children, has within recent years attracted considerable attention on account of the heavy mortality it has produced, chiefly in New York, and also as the result of its prevalence in epidemic form in several of the more northerly districts of Central Europe. The prevalence of a series of cases in a given neighbourhood manifesting classical symptoms would lead presumably to little difficulty in diagnosis but as this fever assumes milder and more anomalous forms where many of the chief symptoms are absent or so slight as to escape detection its diagnosis becomes more difficult and leads to its being mistaken for more common diseases. For example, in the Northamptonshire epidemic of 1890-91 it was mistaken for pneumonia; in the outbreaks in the eastern counties of England in 1890 it was regarded as sunstroke and enteric fever; in the Irthlingborough outbreak of 1905 it was considered to be influenza. In its more acute forms also, in which death ensues rapidly, it has been mistaken for malignant measles, typhus fever, and acute rheumatism.

The case which was admitted to King's College Hospital in April, 1905,[1] was that of a man, aged 36 years, who suddenly sickened some three weeks previously with faintness and steadily increasing headache. On admission he was drowsy but vomited frequently. The knee-jerks were slightly exaggerated, the head was retracted, the legs were

[1] Brit. Med. Jour., April 25th, 1905.

drawn up, and Kernig's[2] sign was present. Some cerebro-spinal fluid was withdrawn by lumbar puncture but proved negative. The rigidity and retraction of the neck increased and unconsciousness supervened. He was delirious at intervals. Lumbar puncture was again performed and the fluid this time was found to contain the diplococcus intracellularis meningitidis (Weichselbaum). After this the patient's condition improved, the retraction of the head disappeared, consciousness returned, and he made a good recovery. This case may be regarded as a fairly typical example of cerebro spinal meningitis and was treated, as were several others recorded in this paper, in the ward of a general hospital without the occurrence of a secondary case in any instance.

Cerebro spinal meningitis has received much more attention in the United States than in England and in perusing the records of this country it seems to have been prevalent in a large number of different areas in England within recent years. It has occurred likewise in Scotland and Ireland and there is little doubt that it exists to a more considerable extent than is generally recognised. Its first known appearance in the United Kingdom was in 1846 when there was an outbreak amongst the inmates of the Belfast and Dublin workhouses. About this time there was an epidemic in America and since then there have been several, both there and in Europe. The first cases which, as far as we can learn, appear to have excited attention in Scotland were published by Dr. Maclagan in 1886 in which he gave a record of 34 cases which had occurred in epidemic form in Dundee during the winter of 1877–78. The first case published, however, was that recorded in the *Edinburgh Medical Journal* of 1880 by Dr. W. Stewart and it was followed three years afterwards by another in the *Glasgow Medical Journal* by Dr. J. Finlayson of Glasgow. But to Dr. W. Frew of Kilmarnock must be given all credit for having established this somewhat conflicting disease on a firm basis as far as Scotland is concerned, and certainly no one has been more energetic in bringing its notice prominently before the medical profession. In a series of three articles[3] he has given a record of 17 cases which occurred in epidemic form around his neighbourhood. The following is an analysis of the symptoms as detailed by him.

Of the 17 cases ten occurred in females, five in males, and in two the sex was not given. Eight were in children under five years of age, all of which were fatal—this emphasising the uniformly fatal issue at the age period 0–5 years. Seven patients were between six and 11 years of age, among whom there were three deaths. In 11 cases the illness was ushered in with rigor, whilst this was not noted in the remainder. All of the patients suffered from vomiting at the onset, and in 12 cases it is specially noted that this symptom was more or less continuous for hours or days. In 14 cases hyperæsthesia associated with neuralgic pains was a prominent feature of the illness. The temperature was high and the pulse rapid in all instances except in one, where the pulse would appear to have continued slow. The tongue was furred and foul in five cases and sordes on the teeth occurred in three cases. There was retraction of the head in 11 cases with opisthotonos in three and tenderness of the spine in seven cases. Spasm of the muscles was specially noted in eight, in two temporary paralysis of one arm, and in another case of one leg is mentioned. In only two cases was it stated that the legs were drawn up on the abdomen. There were convulsions more or less continuous in eight cases, restlessness in seven, moaning or screaming with pain in five, grinding of the teeth in one case, delirium in seven cases, squint in five, severe headache in eight, unequal pupils in three, dilatation in four, and photophobia in three. There were flushing and pallor at intervals in six cases and tache cérébrale only in two. Herpes occurred in three cases, mottled purple on the body in two, and a definite petechial rash in five. Coma more or less profound preceded death in all instances and only in two cases in which recovery took place is it not mentioned. Of a total of 17 cases only four patients recovered, two within three weeks and two after a protracted illness. Absolute deafness after recovery occurred in one case. Ten of the cases may be regarded as of the fulminant type, the duration of the illness varying from five hours to five days.

Dr. J. Nigel Stark of Glasgow reported in 1885[4] two sporadic cases of cerebro-spinal meningitis which were admitted to the Royal Infirmary, Glasgow. Both occurred in females about 20 years of age and terminated fatally. From the descriptions given both cases appear to have been typical examples of this disease. It is worthy of note also that in one of these paralysis of the bladder and rectum was observed before death.

In the *Yorkshire Post* of April 25th, 1905, a man was reported as having died in the Royal Infirmary, Liverpool, and at the inquest cerebro-spinal meningitis was stated to be the cause of death.

Within the past two months ten cases of cerebro-spinal meningitis have been brought under our notice from various sources, and with the view of making this paper as exhaustive as possible it was deemed advisable to cite these cases in some detail.

CASES 1 and 2.—On March 17th, 1906, Dr. A. A. Peel of Crosshill reported a patient, nine years of age, as suffering from suspected cerebro-spinal meningitis. The boy had sickened on March 13th—two days after the death of a brother who had suffered from similar symptoms. This brother, who was seven years of age, had sickened on March 10th and had died next day—viz., after 22 hours' illness. The symptoms as obtained from the mother at the date of our visit were as follows: persistent vomiting, convulsions and high fever, retraction of the head with the legs drawn up on the abdomen, and the muscles generally in a condition of tonic spasm. The mother thought that there was no rash. Diarrhœa was profuse. Convulsions were more or less continuous throughout the illness. The boy first mentioned had sickened on March 13th with rigor, vomiting, and diarrhœa. He complained of pain in the back of his head and vomited frequently till the 16th when his temperature was 102·8° F. On the next day the face was flushed and the pupils were moderately dilated. There was considerable retraction of the head. Pain was complained of in the right temporal region and tenderness on pressure over the cervical spine. There was no evidence of rash. There were no tache cérébrale and no opisthotonos. The patient lay with the legs drawn up and Kernig's sign was present. The muscles generally were in a condition of tonic spasm. The plantar reflexes were normal and the knee-jerks were active. There was no ankle clonus, the heart and lungs were normal, and the urine was free from albumin.

A report from Dr. William Dow of Belvidere Hospital, Glasgow, on May 9th stated that there was a remittent temperature of 103–104° in the evening, falling in the morning. The pulse varied between 80 and 120. The patient had been more or less comatose since admission. There was flushing of the face at intervals, the pupils were unequal, the head was markedly retracted, the neck muscles were rigid, the legs and arms were flexed and in tonic spasm, and there was continuous pain in the head at the front and the back. "The muscles are altogether so rigid that the body can be moved like a statue." On May 8th lumbar puncture was performed and some clear serous fluid was drained off but the diplococcus intracellularis meningitidis was not obtained. The patient was always unconscious and was very much emaciated. He died on May 19th.

CASES 3 and 4.—On April 18th, 1906, Dr. Joseph N. Glaister reported two children, females, aged three and eight years respectively, to be suffering from suspected cerebro-spinal meningitis. The younger child had sickened on the 15th with headache and vomiting followed 24 hours later by the sickness of the elder girl with similar symptoms. On the 18th the younger girl was comatose, squint was present in both eyes, the head was retracted, and Kernig's sign was present. The pulse was 150, weak, and flickering, and the temperature was 101° F. The elder girl was very restless and she screamed when moved. The temperature was 103° and the pulse was 80. On the chest, the throat, and the fronts of the thighs several petechiæ were visible. There was no squint and no tenderness was discernible. This patient died on the 20th, the duration of her illness having been four days. The diplococcus intracellularis was recovered from the nose and also from the cerebro-spinal fluid by lumbar puncture post mortem on the next day. The younger child after making satisfactory progress for several days again became worse, her illness terminating fatally on May 7th—a duration

[2] While the hip-joint is retained in a semi-flexed position the knee-joint is extended passively. A contraction of the hamstrings then sets in and causes resistance to the extension.

[3] Glasgow Medical Journal, vol. xxii., 1884 (nine cases); vol. xxix., 1888 (seven cases); and vol. yii., 1900 (one case).

[4] Glasgow Medical Journal, vol. xxiv., 1885.

of illness of 22 days. Post mortem the diplococcus intracellularis was recovered in this case also.

CASE 5.—This case was reported by Dr. James Taylor of the Royal Infirmary, Glasgow. The patient, a man, aged 27 years, sickened with rigor, vomiting, intense headache, and pains in all his bones on April 15th, 1906. He thought that he had taken influenza. On the morning of the 16th he became unconscious and was on the same day admitted to hospital. He had some swelling of the neck, was now conscious, but refused to speak. He was very restless, the face was pale, and the lips were very dry; the pupils were equal and responded to light, there was no paralysis of the cranial nerves, the knee-jerks and ankle clonus were absent, and the plantar reflex was only slightly marked; the heart and lungs were normal; the temperature was 101·2° F., the pulse was 68, the respirations were 32, and the leucocytic count was 20,400. On the 17th the patient was quieter and the leucocytes numbered 15,200. On the 18th the patient was still in a quiet condition and the leucocytes numbered 20,000; the respirations, however, were now 62 and the pulse was very rapid (from 140 to 160), the patient being semi-conscious and livid, with herpes showing on the lip. On the next day he became increasingly livid and died. The duration of the illness had been four days. No rash was observed. Post mortem the abdominal and thoracic organs were healthy; the base and convexity of the brain were covered with a fibrino-purulent exudation from which the diplococcus intracellularis was obtained.

CASE 6.—A case reported by Dr. H. H. Patrick of the Royal Infirmary, Glasgow. The patient, a man aged 47 years, was admitted on April 19th, 1906, as suffering from pneumonia. He complained of a cold, accompanied with profuse muco-purulent expectoration for 14 days. From the 14th to the 18th he said that he had felt "chilly" but had had no headache nor did he vomit. Throughout the night he was very restless, would not stay in bed, and kept muttering to himself. He lay in a dull sleepy condition and when roused answered slowly. There was tremor of the hands, the knee-jerks were absent, the plantar reflex was exaggerated, and there was pain on movement in the lumbar region. The temperature was 102° F. in the evening and 99° in the morning; the pulse was 92 and regular. The heart and lungs were normal, there was albuminuria, the leucocytes numbered 18,000, and incontinence of the bowel and the bladder was noted on several occasions. On the 23rd the patient was delirious and his general condition was worse; the respirations were 48 and the pulse was 144, weak, and irregular; the pupils were unequal, the patient was very restless, Kernig's sign was well marked, and there was external squint in both eyes. On the 24th the temperature was 100°, the respirations were 48, the pulse was 140 and weaker, and the patient was moaning with pain. On the 25th the patient's condition was grave; the temperature was 102·8°, there was slight twitching of the right arm, and death took place at 7.35 A.M. Post mortem there was extensive fibro-purulent exudation beneath the pia mater with thick yellow pus around the cerebellum. This same condition was present in the spinal cord, especially towards the caudal extremity. The diplococcus intracellularis was successfully isolated. Although this case did not present the usual classical symptoms of cerebro-spinal meningitis and might readily have been mistaken for another disease, the fact that it was confirmed bacteriologically should leave no doubt as to its true nature.

CASE 7.—A case reported by Dr. W. Dow of Belvidere Hospital. The patient, a man, aged 23 years, had sickened on April 28th, 1906, with rigor, severe occipital headache, and pain along the cervical region and was admitted to hospital on April 29th. The pupils were dilated and there were photophobia and great sensitiveness to noises, the head was retracted, and the cervical muscles were rigid. The muscles of the back also were contracted and the body was stiff, there being orthotonos but no opisthotonos. Kernig's sign was present and there was hyperæsthesia all along the spine. The patient was conscious; no spots or petechiæ were observed but there was herpes on the right side of the mouth. On May 4th the patient complained of diplopia but it passed off in a day or two. The temperature was never very high, ranging between 101° and 102° F. in the evening and remitting in the morning. Lumbar puncture was performed on April 30th, and although a few drops of purulent exudate were obtained the diplococcus intracellularis was not found on examination. On May 9th the note taken was: "He is at times delirious and cries out with pain, heart and lungs normal, and urine free from albumin." The patient died on May 21st.

Notwithstanding the fact that the diplococcus was not successfully isolated the sudden onset of the illness with the other associated symptoms in an otherwise healthy man merits no other diagnosis than that of cerebro-spinal meningitis.

CASE 8.—A case reported by Dr. G. B. Eadie of Ruchill Hospital, Glasgow. The patient was a man, aged 24 years, who was taken ill on May 4th, 1906, with headache, pain in the lumbar region, and delirium. There was no vomiting but there was constipation and the tongue was dry and brown. On admission to hospital on the 11th the temperature was 102·8° F. and the pulse was 120. There were no rose spots but the skin over the left side of the face and neck had a bluish mottled appearance. The patient lay upon his back, was dull and drowsy, muttered to himself at intervals, became conscious when roused, and suffered from pain in the back and shoulders which was aggravated by movement. The neck muscles were rigid; there was not much retraction; there was tenderness on pressure over the upper spine. There was no squint; the pupils were contracted, were equal, and responded to light and accommodation. There was loss of power in the arms and the legs. The superficial and deep reflexes were absent. Kernig's and Babinski's phenomena were absent. There was no ear trouble. The lungs, the heart, and the digestive system were normal. In the urine there was a slight trace of albumin but it contained no blood or sugar. Later the loss of power became absolute. A small quantity of purulent fluid was obtained by lumbar puncture. A film showed many polymorphonuclear leucocytes and numerous cocci as diplococci, tetrads and in groups as staphylococci, some intracellular, mostly extracellular. The patient died at 12.10 A.M. on May 12th. Cultures on serum and broth of the fluid showed staphylococci aurei. No post-mortem examination was allowed. Laminectomy was performed. On opening the canal thick creamy pus loaded with staphylococci escaped. Cultures gave growths of the staphylococcus aureus.

CASE 9.—A case reported by Dr. Dow of Belvidere Hospital. The patient, a male child, aged five years, sickened on May 11th, 1906, with rigor, sickness, vomiting, and pain in the head and neck. On admission to hospital on the 14th the cheeks were flushed; the head was markedly retracted, the occiput almost resting on the spine. The muscles of the back were rigid. Opisthotonos was present, as was also Kernig's sign. The patient was restless and there was an increase of the knee-jerks and the plantar reflexes. There was no ankle clonus. There was herpes at both angles of the mouth. The pupils were unequal at times. The heart and lungs were normal; the tongue was furred and white. No albumin or sugar appeared in the urine. There was no rash on the body. Lumbar puncture was performed on two occasions, the turbid fluid drawn off containing the diplococcus of Weichselbaum. No growth on blood serum was obtained. The leucocytes numbered 24,000. The child improved after lumbar puncture and the opisthotonos disappeared.

CASE 10.—A case reported by Dr. Dow of Belvidere Hospital. The patient, a female, aged 10 years, was taken ill suddenly on May 9th, 1906, with rigor, sickness, and vomiting. There was pain in the back and this was followed by delirium on the next day. No spots or rash was observed. On admission to hospital on the 12th the face was flushed and there was herpes at both angles of the mouth, over the right cheek and the neck, and also over the radial side of the left arm and the upper part of the left scapula. The back was rigid and the head was slightly retracted. Kernig's sign was present. The knee-jerks and plantar reflexes were excessive. There were delirium and restlessness and the body was excessively tender to touch. The pupils were unequal at times and the left eye was inflamed and discharging. The heart and lungs were normal. The tongue had white fur. The motions were passed in bed. There was no albumin or sugar in the urine. No fluid was obtained by lumbar puncture. The leucocytes numbered 14,000. The temperature varied from 99° to 103° F. and the pulse from 90 to 160. This patient is now well but is affected mentally.

Since writing the above over 30 other cases have been brought under notice and these will form the subject of a future communication. Dr. Frew was successful in establishing a connexion between five of the 17 cases above noted, supporting the view that personal infection probably through the nose or mouth plays a part in the dissemination of this disease. This view, however, is not generally upheld and is not in consonance with the records of epidemics in America and Europe in which only in relatively few

instances are two cases reported in one house. In the cases afore-mentioned as having occurred in Glasgow, in only two instances did two occur in one family and in none other than those was any association with a previous case proved. Since, however, the possibility of personal infection cannot yet definitely be excluded it is advisable to carry out isolation and disinfection in all cases. With this object in view the medical officer of health of Glasgow has recommended that cerebro-spinal meningitis should be included in the list of notifiable diseases in that city.

Glasgow.

THE CAMMIDGE REACTION.

BY A. E. TAYLOR, M.A., M.B., B.C. CANTAB.

IN THE LANCET of March 19th, 1904, p. 782, Dr. P. J. Cammidge gave a description of a series of urinary analyses which sharply distinguishes cases of pancreatic disease from other pathological conditions. The hypothesis upon which he built up his series of reactions is a very ingenious one and is briefly as follows: Just as in hepatic disease the constituents of bile are known to get into the blood and appear in the urine, so in pancreatic disease the constituents of pancreatic juice may get into the blood and appear in the urine. Now if pancreatic ferment were circulating in the blood one of its possible effects would be the splitting up of the body fat into fatty acids and glycerine; such a splitting up does occur in acute pancreatic disease and is manifested in the phenomenon of fat necrosis. But in the areas of fat necrosis free fatty acids are found; the glycerine must go somewhere, is it possible to detect it in the urine? Dr. Cammidge says yes, and not only in severe cases where fat necrosis is obvious but in every case of pancreatic disease. The series of reactions devised by Dr. Cammidge to detect this glycerine, or glycerine derivative, body in the urine is so simple and demands so little in the way of apparatus as to bring it within the easy performance of any general practitioner.

The Cammidge reaction, then, marks a grand advance in our capacity to diagnose pancreatic disease with ease and certainty, if it has the specific characters which are claimed for it, and it only remains to be seen if other workers are able to carry out and confirm Dr. Cammidge's results. Unfortunately those who have communicated on the subject have been very much divided in opinion as to the value of this series of reactions. Ever since the appearance of Dr. Cammidge's paper I have been engaged in applying the test to the urines of various patients under my care and I now propose to record the results of my analyses of the urines of 110 patients. Of these 110 urines, 9 gave a positive reaction and 101 a negative one; of the 101 negatively reacting urines, 21 gave a crystalline deposit with phenylhydrazin after hydrolysis with hydrochloric acid (these 21 urines gave no crystalline deposit with phenylhydrazin before hydrolysis, except one or two which contained sugar; those which contained sugar were fermented with yeast until they no longer gave the crystalline deposit with phenylhydrazin), but the other tests of the Cammidge reaction series showed them to be cases other than of pancreatic disease or negatively reacting.

The following is a short analysis of the clinical conditions of the patients and the results of testing their urines:

Severe abdominal contusion: two cases, both positive.
Chlorotic anæmia: one case, negative.
Appendicitis: two cases, both negative.
Asthma: one case, negative (crystals).
Bronchitis: one case, negative.
Broncho-pneumonia: two cases, both negative (crystals in one).
Epidemic colitis: seven cases, five negative (crystals in one) and two positive.
Cystitis: three cases, all negative.
Diabetes: three cases, two negative and one positive.
Diphtheria: two cases, both negative (crystals in one).
Dyspepsia: three cases, all negative (crystals in one).
Dilated stomach: one case, negative.
Eclampsia: one case, negative.
Empyema: one case, negative (crystals).
Gall-stone colic: three cases, one negative and two positive.
Acute gastritis: six cases, all negative (trace of sugar in one).
Gonorrhœa: one case, negative.
Acute gout: one case, negative (sugar).
Geographical tongue: one case, negative.
Herpes zoster: one case, negative.
Hysteria: two cases, both negative.
Nocturnal incontinence of urine: two cases, both negative.
Influenza: four cases, all negative (crystals in one).
Infarct of kidney (septic): one case, negative.
Infantile diarrhœa: three cases, all negative (crystals in one and a trace of sugar in another)
Catarrhal jaundice: one case, negative.
Lumbago: one case, negative.
Measles: 11 cases, all negative (crystals in three and a trace of sugar in one).
Mitral regurgitation: two cases, both negative.
Acute nephritis: four cases, all negative (crystals in one).
Chronic nephritis: six cases, all negative.
Chronic obstruction of the bowel: two cases, both negative.
Parametritis: two cases, one positive and one negative.
Pericarditis: one case, negative (crystals).
Pulmonary tuberculosis: two cases, both negative (crystals in one).
Pneumonia: four cases, all negative (crystals in two and a trace of sugar in one).
Puerperal septic disease: one case, negative.
Rheumatic fever: five cases, all negative (crystals in three).
Renal sarcoma: one case, negative.
Scarlet fever: three cases, all negative.
Acute septic poisoning: three cases, two negative and one positive.
Stricture of the œsophagus: one case, negative.
Syphilis: one case, negative.
Typhoid fever: one case, negative.
(In the above list "crystals" refers to the fact of a crystalline deposit forming with phenylhydrazin after hydrolysis; as mentioned before, "supplementary tests showed these cases to be negative.")

In addition to these the normal urines were tested and the results were uniformly negative.

The cases where a positive reaction was obtained are given in greater detail below:—

CASE 1.—The patient was a coal miner, aged 22 years, who previously had been healthy. He was riding on a set of coal skips, which set was being hauled up an incline by means of a steel rope. The rope broke and man and skips rushed pell-mell to the bottom. The patient had bruises and abrasions all over him and a scalp wound on the forehead three inches long, going down to the bone; the severest bruising was over the front of the abdomen. For many days he complained of very severe pain and tenderness in the upper part of the abdomen, while his urine was smoky from the admixture of a small quantity of blood. The urine yielded no crystals with phenylhydrazin. Cammidge reaction A resulted in an abundant crop of fine crystals, which were dissolved in one minute by 1 in 3 sulphuric acid. Cammidge reaction B yielded no crystals. The urine was repeatedly re-tested at short intervals with similar results. As soon as he was able he went away for a holiday, and three months later, on his return, his urine was again tested, with negative results to all three tests. Result: complete recovery.

CASE 2.—The patient was a wheeler at a coal mine, aged 26 years, previously healthy. He was engaged coupling sets of full skips of coal on to the steel rope from the hauling engine and also in signaling for the stopping and starting of the engine. He got caught in a narrow place in the drive and the corner of the oncoming iron skip took him between the legs and pinned him against a jutting piece of the stone wall, the piece of stone pressing heavily upon his epigastrium. Fortunately, he was able to stop the engine before a great deal of damage was done, but his perineum was torn (the tear extending into the rectum) and there was extensive bruising over the upper part of the abdomen. He had severe abdominal pain for four or five days and considerable tenderness, but there was no hæmaturia in this case. His urine yielded no crystals with phenylhydrazin. Cammidge reaction A yielded an abundant crop of fine crystals soluble in two minutes in the sulphuric acid solution. Cammidge reaction B yielded no crystals. His urine was tested on two subsequent occasions with a like result, but three months later all three tests were negative. Recovery was complete.

CASE 3.—The patient, a coal miner, aged 36 years, who previously had been healthy, was suddenly taken ill with epidemic colitis. The motions occurred every few minutes and consisted of mucus and blood only and were accompanied by severe griping pain. The patient was pale and collapsed. His urine was concentrated and loaded with urates; it yielded no crystals with phenylhydrazin. Cammidge reaction A yielded some medium-sized crystals soluble in one minute in the sulphuric acid solution. Cammidge reaction B yielded no crystals. Recovery was complete.

CASE 4.—The patient, a healthy married woman, aged 28 years, was suddenly taken ill with epidemic colitis. The motions occurred every half hour and consisted of an ounce or two of pure blood and were accompanied by severe griping pain and tenesmus (the patient had had several previous attacks, the motions sometimes consisting of mucus and at others of blood). Her urine yielded no crystals with phenylhydrazin. Cammidge reaction A yielded a fair crop of

medium-sized crystals, soluble in 150 seconds in the sulphuric acid solution. Cammidge reaction B yielded no crystals. After-history: Many subsequent attacks of colitis.

CASE 5.—The patient was a coal-miner, aged 36 years. He was very alcoholic, had had no previous illnesses, and was said to be very strong and healthy. He had no premonitory symptoms up to an hour or two before his illness, when he was suddenly taken ill with diarrhœa of mucus, each motion being accompanied by severe griping pain and tenesmus. The motions occurred every half hour and were streaked with blood. The temperature was normal. The abdomen was lax but tender along the course of the large bowel. Per rectum ulceration was found and examination gave rise to severe pain. The urine contained 2 per cent. of sugar; after fermentation with yeast it yielded no crystals with phenylhydrazin. With Cammidge reaction A, however, it yielded an abundant crop of medium-sized crystals which were soluble in 98 seconds; with Cammidge reaction B it yielded no crystals. Operation was urged but refused. In three days constipation succeeded the diarrhœa and the abdominal pains and tenderness had ceased. The patient was decidedly worse, with a very foul tongue, feeble, rapid and irregular pulse, subnormal temperature, and occasional vomiting. On the fifth day hypostatic pneumonia of both lungs supervened and on the seventh day the patient died comatose. The glycosuria continued all through. A very limited necropsy was allowed, the wife insisting that nothing more than a small incision into the abdomen should be made. Post mortem the liver was much enlarged, dark, and gorged with blood.. The large bowel was anæmic and the mucous membrane was shaggy. The small intestines were a little congested. The other abdominal organs were normal in appearance and there was no peritonitis. Particular attention was paid to the pancreas, but no alteration in size, colour, or consistence could be detected. A small piece was removed and under the microscope this showed degeneration of the islands of Langerhans.

CASE 6.—The patient was a coal-miner, aged 23 years. He came complaining of severe colicky pains at the navel; he had had several previous attacks but none of the severity of this one. The patient was jaundiced but no enlargement of the gall-bladder or liver could be made out. The urine was deeply bile-stained and gave no crystals with phenylhydrazin. Cammidge reaction A yielded a few small crystals soluble in 90 seconds. Cammidge reaction B yielded no crystals. He was advised that operation was necessary and he went to Melbourne. He was not seen again.

CASE 7.—The patient was a married woman, aged 61 years. She stated that she had been a martyr to dyspepsia for many years and had had one or two attacks of colic. She was attacked with severe abdominal pain of a griping character and with constant vomiting; the motions were loose and very foul. In the course of the next three days deep jaundice supervened and was accompanied by a larger and tender gall-bladder. The gall-bladder ultimately reached to within two inches of the umbilicus and the patient became so acutely ill that I told her and her relatives "she would die." Both patient and relatives, however, were quite firm in their determination to accept death rather than operation. She gradually recovered. Her urine was deeply bile-stained and yielded no crystals with phenylhydrazin. Cammidge reaction A yielded a medium crop of fine crystals soluble in two minutes. Cammidge reaction B yielded no crystals. No gall-stone was discovered in the motions. 12 months later the patient had another similar but shorter and milder attack; this attack also was accompanied by jaundice and enlargement of the gall-bladder; but the patient's urine reacted negatively to all three tests. The patient is still under treatment for chronic dyspepsia with acute exacerbations.

CASE 8.—The patient was a married woman, aged 39 years, who had been subject to chronic dyspepsia with acute exacerbations for many years. She had had an abortion of a fœtus of about the second or third month; six weeks later she called me in to treat her menorrhagia. She was curetted and on the sixth day she developed a parametritis in the left broad ligament. Her temperature ranged about 101° F. for a week. Her urine contained no albumin and yielded no crystals with phenylhydrazin. Cammidge reaction A yielded a moderate crop of fine crystals soluble in two minutes. Cammidge reaction B yielded no crystals. Recovery was complete and uneventful, and the patient left the district.

CASE 9.—The patient, a male, aged 19 years, came with suppuration round a carious upper molar tooth. He exhibited the signs of septic poisoning (e.g., vomiting, fever, and repeated fainting). His urine gave no crystals with phenylhydrazin. Cammidge reaction A gave a crop of fine crystals soluble in one minute. Cammidge reaction B gave no crystals. He was not seen again after the tooth was removed.

My personal opinion of this series of reactions is "that it is a very valuable aid in the diagnosis of pancreatic disease, but it is not infallible." Some of the cases above, in which a positive reaction was present, gave little or no other evidence of pancreatic lesion, and, on the other hand, cases have been quoted where the reaction was negative but pancreatic disease was present[1]; but no such case has come within my personal experience.

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THE TREATMENT OF CONSUMPTION IN SANATORIUMS.[2]

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AS a student of medicine, when first I commenced the study of disease and the treatment of it, I was much perturbed by reading, in reference to a certain infective disease, words to the effect that for a mild attack no treatment was necessary, for a bad attack all treatment was futile. The contemplation of such a precept gave rise in my mind to the question whether the study of disease and the practice of medicine were worth while if it were impossible to render any aid towards recovery from an infective process. One result, however, of this meditation was of value to me, for I recognised the important fact that in those who recovered from infective processes some natural power must have been at work to bring it about and that in all cases, more especially those for which we cannot lay claim to any specific remedy, much may be done by stimulating this power to act or assisting it when in action to overcome the infection. I am pleased that an opportunity has been afforded me to come before you this evening to say with the confidence of firm belief and experience that in one infective process—phthisis pulmonalis—treatment is of avail, is called for and useful, not only in mild cases, to which it is particularly adaptable, but also in the more serious cases is it eminently desirable and beneficial. Were we able to prognose with certainty the definite clinical course of any single case of pulmonary tuberculosis it would influence our procedure accordingly, but we cannot do this with the necessary exactitude, hence our efforts in the direction of treatment should not be relaxed in any circumstances.

In support of my contention that the sanatorium treatment of pulmonary tuberculosis is worth while, I do not purpose laying before you any statistical records; there are so many factors which may qualify them, rendering them particularly elastic and open to various interpretation, that some exception might be taken to them, arrange them how you will. I purpose rather to point out and to emphasise the principles which should form the foundation upon which the treatment of pulmonary tuberculosis should be based and how these may best be applied. I leave it to your good and safe judgment to accept or to refuse my plea on its merits.

Let us, then, first of all consider the question, What is phthisis pulmonalis? I find it extremely difficult to get people to understand what it really means. We may say that primarily it is the invasion of pulmonary tissue with tubercle bacilli; but this is not all, for we must remember that it differs most profoundly from tuberculous infection in any other region of the body, partly because of the peculiar gross and minute anatomical structure of the lungs and the ever-present liability to the danger of the

[1] THE LANCET, May 21st, 1904, p. 1459; June 11th, 1904, p. 1685; and July 1st, 1905, p. 15.

[2] A paper read as the opening of a discussion at the Liverpool Medical Institution.

occurrence of mixed infections, so largely responsible are they for ulcerative and septic processes with their serious consequences. There are secondary complications the possibility and probability of which are a constant menace and anxiety: laryngeal affections and the effect of the absorption of the proteins of the bacilli upon the heart are instances of these with which we are so familiar, the one acting as a barrier to alimentation and the other carrying with it the danger of sudden or unexpected dissolution.

We must also take cognisance of the etiological factors in relation to the tuberculous infection. We must remember that the tubercle bacillus is passive and subservient to circumstance in its peregrinations; it does not wander about with any malicious intent looking for a prey, but its advent to the human body is accidental rather than intentional on its part. Its residence there is invited and assured by factors which belong to the patient and are under control to a very great extent. These etiological factors may be summed up as all or any conditions which tend to lower the vitality of the individual, such as are assured by bad or insufficient food, bad hygiene, bad habits, ignorance or folly, want or excess—apply one or all as you will. They are applicable to communities or individuals alike, but once the infection has occurred the infective agent takes no note of communities, societies, individuals, or economics. When we speak of the lower vitality due to the influence of the above etiological factors we are naturally led to inquire where this adverse influence is felt. My reply is in the cells and fluids of which the body is composed and to them individually or collectively the result is a lessened power of sustenance and defence. On the one hand, the bacillus endowed with a vitality, which for the purposes of our argument we must assume in all cases as a constant, on the other, the cell, already perhaps lacking the natural conditions of health necessary even for the performance of its normal functions, meet in unequal combat, the cell being called upon to resist an unexpected foe for which it is unprepared.

The conditions are bad enough when a simple tuberculous infection takes place; how much more serious and fraught with possible disaster are they when other and mixed infections are superadded?

Viewing this combat from a point of vantage we recognise all the activities and tactics exhibited by the cells for sustenance and defence exercised towards the overthrow of the invading bacilli, and divine that some force which we term "nature" is at work. And as the bacillus, so this "nature" in her efforts takes no thought of individuals, societies, communities, or social economics, except in so far as they relate to cells, and observation of this will teach us many lessons. Her energy is first exercised in the care of unicellular organisms. This great cellular army defending itself against the invader must be sustained and rendered efficient. Hence on this basis must we found our line of treatment, the first principles of which must be applied with this end in view. We must, however, be assured that our principles are sound and true. What are they? I state them briefly: (*a*) To remove the patient from all pre-existing conditions which we accept as causative factors in the departure from normal physiological activities, and the lowering of resistance. (*b*) To guard against the possibility of mixed infections. (*c*) To compensate all lack of sustenance and defence and to increase by every means at our disposal the power for offence and repair by according the patient the free enjoyment of pure air, by an abundant supply of good food, and by the assurance of necessary rest and exercise. (*d*) To remove all calls upon the patient's energy which are usually exercised in the general routine of daily labour and the avocations of life. By these means, applicable as they are to the individual cells of the body, we endeavour to raise them from their fallen estate and confer upon them the strength so essential for their welfare.

The application of these principles must be carried out under the care and guidance of a medical man who thoroughly understands and believes in the necessary *régime*. The individuality of the medical man is an all-important aid; he must establish a bond of sympathy between himself and his patient and must exercise an inflexible perseverence in the course which he knows to be best for the patient and which these principles dictate. He should never for a moment lose sight of the fact that "it is only the full satisfaction of all the physiological and hygienic demands of the organism" from the least to the greatest that can bring about a good result. How and under what conditions may these principles best be applied? I have no hesitation in answering this question, and emphatically advocate that the best possible means when obtainable are to be found in an institution specially adapted for the purpose, and where the patient is under the constant care and tutelage of a responsible physician who enforces these essential elements of treatment in the systematic and exact way, and with the due amount of respect which their truth and importance demand. In fact, I advocate treatment in a properly conducted sanatorium worthy the name.

That such a method of treatment is desirable and demanded admits of no discussion. To advocate it and to apply it is the truest and most natural response to nature's appeal. When I advocate this so strongly I do so on the grounds of common-sense and justice and on the results of personal investigation. To this last and as a test I entered a sanatorium for the purpose of submitting to the *régime* exactly as any patient would be expected to; and of all means to an end I can safely say that I know of none so invigorating, so sensible, so trustworthy, and so right as the *régime* of a good sanatorium. There is no line of treatment which holds out so much hope and encouragement or which affords so great a prospect of success. I do not say that it is infallible but if it does not cure or even arrest the disease it will prolong life and prove a real benefit in any case.

Look at it from any point you will, introduce any factor you will—for example, the so-called "personal factor" of the case—well, the better the "personal factor" the better the result; or again, the so-called "stage" of the disease, the earlier and purer the infection the better the hope of recovery or arrest and even in the later pathological "stage" much good may be accomplished. I repeat, discuss the question from any standpoint, the principles of treatment remain the same: they are true, honest, sensible, natural, and right, and being so demand the advocacy of all true, honest, sensible, and right-minded members of our profession. If this line of treatment, as I say it is, be endowed with such attributes, then I plead its practice as an important and fundamental rule of our procedure.

There is very little doubt about the immediate results of treatment but much controversy has arisen and will continue for some time as to the remote benefit which ought to be expected of it. This, to my mind, depends upon two main factors: first, that the disease be recognised and treated in its earliest or incipient form; and, secondly, the conditions under which the patient has to live after leaving the sanatorium. The first of these is all-important and I have no doubt that the more permanent result is to be expected and realised in early infections, providing a sufficiently long stay has been made at a sanatorium to insure the maximum of benefit. To business men I put the matter in a business light and explain to them that the investment of their money at a sanatorium will prove a sound one and bring them a good return in the future. As to the permanency of benefit to cases in general, much will depend upon the conditions in which the patient is placed subsequent to treatment—that is, the degree of reversion to those conditions which I have explained are etiological factors in determining the origin of the infection. It stands to reason that a person who is brought to tuberculous infection, by means of adverse hygienic influences, cannot be expected to keep well if such influences are again allowed to act. From the same cause the same effect is bound to recur. This, however, is no argument against the correctness of the treatment. The crux of the matter rests here, that such conditions as are responsible for the contraction of the disease should not be allowed to exist. As I have pleaded before so I do again, that each man's home should be a sanatorium, pure and clean. This can and ought to be assured by the unrelenting efforts of wise and ever-patient sanitary authorities and the education of the people, particularly the children, in the laws of health and cleanliness. To this end I would strongly advocate the appointment of special public health authorities for the purpose whose sole duty should be to combat this scourge of so great magnitude, to attack the whole subject in a statesmanlike manner with the authority of the Government.

A sojourn in a sanatorium teaches the patient how he ought to live. This lesson he takes with him to his home and reveals the truth of it to others, providing he remains faithful to the service rendered him. I do not say that the treatment of consumptive patients in sanatoriums will prove the only essential measure for the eradication of tuberculosis

from our midst but it will do its share in this in many ways, by arrest of the disease, by education, and by isolation and prevention of infection of others. The question of dealing with tuberculosis from the standpoint of economics applicable to societies, communities, or nations is a thing in many ways apart from the subject of treatment at the moment. As medical men our immediate duty in relation to those who seek our advice and aid is to endeavour by all the means in our power to relieve suffering and to save or to prolong life where and when we can. In cases of pulmonary tuberculosis the sanatorium method of treatment does this and on these grounds the obligation rests upon us to uphold and advise it. The sanatorium method of treatment should be the first essential procedure and upon it as a foundation all other therapeutic measures, whether medicinal or by the use of such agents as tuberculin, which has been revived with such promise by the brilliant investigations of Professor A. E. Wright and others, should be built as a superstructure; with the certain assurance that on such a good foundation will the elements of which the superstructure may be built acquire their proper place and greatest sphere of usefulness.

"If we wage a vigorous war on all that is insanitary in our cities, towns, and villages; if we endeavour to raise the coming generation to be a strong people, able to resist the invasion of the pathogenic micro-organism which may escape the watchful eye of the sanitarian; if we can, by the creation of sanatoria for all classes, rich and poor, and by carrying out the hygienic, dietetic, educational, and symptomatic treatment for all consumptives outside of such institutions, cure the curable, and make harmless the incurable tuberculous patients, the problem of dealing with the most widely spread of all diseases will have been solved. What is needed to attain this end is the united working of the statesman, philanthropist, sanitarian, physician, and the goodwill of an intelligent people, for, as the immortal Pasteur has said, 'It is in the power of man to cause all parasitic diseases to disappear from the world.'" Any effort, however small, productive of results which at first may seem discouraging, if it be sincere and based upon sound principles, must tell in the end and prove itself worth while.

Liverpool.

THE NERVOUS PHENOMENA FOLLOWING ATTEMPTED SUICIDE BY HANGING.

BY R. NEVILLE HART, M.A., M.B., B.C. CANTAB.

IT is well known that after a non-fatal attempt at suicide by hanging curious nervous phenomena may take place. Although hanging is nearly the commonest method of self-destruction in this country, it is seldom that one has an opportunity of observing such phenomena after an attempt which is so often successful in its object. The following case appears worth recording.

On Dec. 26th, 1905, I was called to see a man, aged 40 years, who had attempted suicide by hanging. He was married and had been in the past a policeman and an asylum attendant. There was no history of alcoholism or insanity nor had he been drinking on that day. For some months he had been very depressed and morbid but so far as could be elicited he had had no definite delusions or hallucinations. A few days before the attempt he had suggested to his wife that they should commit suicide together. He had, however, eventually arranged a jack towel and suspending it from a roller fixed to two gas pipes, had apparently swung himself off some stairs. After being suspended, as far as can be discovered, for about ten minutes he was cut down, knocking his head slightly against the wall as he fell. When I first saw him some minutes after this I found him lying on the floor somewhat cyanosed, with respirations of 16 to the minute, breathing deeply and regularly. The mark of the towel pattern was seen on his neck, the towel having passed round above his thyroid cartilage with the knot on the left. His pulse was 100, regular, and of normal volume and tension. His pupils were equal and pin-point. His temperature was normal; he was unconscious and there was no conjunctival reflex. There had been no escape of fæces, urine, or semen. There was no evidence, in the shape of a bruise or palpable fracture, of the knock he was said to have received on his head and there was no bottle in his clothes or in the neighbourhood of his body which might have contained a poison, nor had his breath any odour. He was put to bed and watched at his own home for four hours, during which time he showed no signs of regaining consciousness. His pupils dilated slightly, the right more than the left, both reacting to light. He gradually became quite stiff equally and simultaneously over his whole body, his reflexes being excessive and a marked ankle clonus being present on both sides; his plantar reflexes were both of the flexor type. He was then admitted to King's College Hospital, where his heart, lungs, and urine were found to be normal to physical examination; his pulse was 104 and his temperature was 99·4° F. He was still rigid and his pupils were in the same condition; he had conjugate deviation of his eyes to the right and exhibited for half an hour at a time on several occasions a rhythmical flexion and extension of his right forearm. During the night he had incontinence of fæces and urine.

On the next morning the patient was still unconscious but was not so rigid; his tendon reflexes were not exaggerated but he still exhibited conjugate deviation of his eyes to the right. He did not begin to answer questions until 40 hours after his being cut down and then he did so stupidly, inaccurately, and slowly. His eyes were now normal and he had regained control over his excreta. He gradually got more lucid and was discharged from the hospital on Jan. 4th, 1906. He stated that he remembered nothing of his attempt on his life and thought that he had walked to the hospital with his wife, whereas he had in reality been brought by the police on a stretcher. Though depressed and at times somewhat troublesome he suffered from no delusions nor hallucinations. Since his discharge he has been sent to an asylum as insane.

I have not endeavoured to go into the minute details of the above case nor have I given the treatment that was employed. Nervous phenomena of a similar nature are recorded by many, chiefly foreign, observers. Petrina[1] records a case remarkably similar to it in which the patient remained unconscious for 24 hours, during which time there were clonic convulsions of the body followed by a general condition of muscular rigidity. Terrien[2] refers to a case in which there were epileptiform convulsions followed by opisthotonos and in which movements as if walking occurred, and to another in which after being unconscious and convulsed the patient recovered consciousness but was amnesic. Wagner[3] records a case in which the patient was unconscious for some time and on his recovering consciousness he rapidly became demented. Many other cases showing similar nervous phenomena have been recorded by Bellin,[4] Verse,[5] and other observers.

The pathology of such conditions is necessarily almost entirely a matter of speculation and it is difficult to decide whether some are not due to the mental condition of the patient which led up to the act rather than to its effects. It would be interesting to know if such events were as common when recovering from attempted non-fatal judicial hanging or after attempted non-fatal homicidal hanging; both, of course, are very rare. Such phenomena could well be caused by the profound circulatory disturbance in the head by the compression and subsequent release of the vessels in the neck. In some cases of death from hanging cerebral hæmorrhage has been shown post mortem to have occurred, but it is rarely found and then usually in the form of small dural ecchymoses. These may well occur in cases that recover, such as in the one I have recorded.

I am indebted to Dr. N. Dalton for permission to publish this case which was under his care.

King's College Hospital, W.C.

[1] Prager Medicinische Wochenschrift, 1880.
[2] Progrès Médical, 1887.
[3] Wagner: Jahrbücher für Psychiatrie, 1889.
[4] Trudi Kharkov. Med. Obsh., 1895.
[5] De la Pendaison Incomplète ou Ratée et des Accidents Consécutifs.

BRITISH OPHTHALMIC HOSPITAL, JERUSALEM.—At a meeting in aid of the funds of this hospital held on June 27th, at 7, St. James's-square, London, W. (by kind permission of Earl Egerton of Tatton, chairman of the hospital committee), H.R.H. the Duke of Connaught presiding, short addresses were given by General Sir Charles Warren, G.C.M.G., Mr. Israel Zangwill, and Mr. R. Brudenell Carter.

SALICYLATE POISONING IN CHILDREN.

BY FREDERICK LANGMEAD, M.D. LOND., M.R.C.P. LOND.,

MEDICAL REGISTRAR TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET, LONDON, W.C.

With an Addendum by W. H. WILLCOX, M.D. LOND., M.R.C.P. LOND., F.I.C., *Lecturer on Pathological Chemistry at St Mary's Hospital, Paddington, W.*

THERE is no medicine which, if used in excess, does not become a poison. This, which may be considered an axiom, does not, however, deter the physician from employing such as are useful, since he well knows that often those of the greatest value require the greatest care in their administration, giving as they do symptoms varying in severity with the individual and out of all proportion to the dose. He, indeed, frequently increases his doses when employing certain drugs until toxic symptoms are evident, believing that only under such conditions can the maximum benefit be obtained. Among the most valuable of recently introduced medicines is undoubtedly the salicylate group. Dr. D. B. Lees in the Harveian lectures of 1903 spoke very strongly in favour of the value of salicylate of sodium in the treatment of rheumatic affections and deplored the inefficient way in which it was given. He himself is in the habit of using doses which to others are truly enormous, giving from 100 to 300 grains a day to children of from six to ten years of age. He believes that by gradually increasing an initial small dose he can administer the drug in such large doses as these without producing any of the much feared symptoms of salicylate poisoning. I have had the opportunity to watch several of his cases so treated and can say that not once did I see deafness or buzzing in the ears, whilst patients on even the largest doses were bright and cheerful, playing with their toys and chatting loudly with their friends in the ward. Dr. Lees mentioned, however, in his lecture one case of a patient in whom symptoms like those of diabetic coma arose. These he looks upon as evidences of acid poisoning such as occurs in that condition and in consequence gives with the sodium salicylate double the dose of bicarbonate of sodium as a prophylactic measure. The object of this paper is, firstly, to record a series of cases in which these symptoms occurred and, secondly, to show by what means they may be obviated.

By acid poisoning symptoms in these cases is meant drowsiness, deepening into coma, and, if untreated, ending in death, and air hunger of the Kussmaul type increasing with the drowsiness. The child is flushed, the eyes are bright, and there is usually great thirst. Vomiting usually, but not always, precedes these symptoms. The drowsiness may replace, or be associated with, delirium. When I saw the first two or three of these cases I was interested in the condition called cyclical or recurrent vomiting of children in which acid poisoning also occurs and this led me to examine the urine of the patients for acetone, which has frequently been found in that condition and, indeed, has been considered by some to be its cause. I found acetone in large amount in all the cases in which it was looked for. In every instance both Legal's test and the iodoform reaction of Lieben were used. The former, which was found to be the readier for clinical work, was employed as follows. About a quarter of the test tube was filled with urine and to this was added sufficient alkali to neutralise it, often nearly an equal quantity of liquor potassæ; a few drops of sodium nitroprusside (10 per cent.) were now added, causing a red colouration. In the presence of acetone this was converted into a dark claret colour on acidifying with acetic acid. In its absence the red colour disappeared. I did not get this reaction in the urine of patients taking salicylate in whom no poisoning symptoms had developed. The sweet odour of acetone was evident in the breath of all the more severe cases. This group of symptoms would seem to be not generally recognised as occurring during salicylate treatment. From the literature, however, we gather that Quincke as far back as 1882 speaks of a "salicyl-dyspnœa" resembling that in diabetic coma. Dr. F. J. Poynton, too, groups it among the symptoms to be watched for in rheumatic cases treated by this drug.

CASE 1.—The first case of the series is the fatal one referred to by Dr. Lees. It is that of a boy, aged five years, who was admitted into the Hospital for Sick Children, Great Ormond-street, on Oct. 2nd, 1901, suffering from acute rheumatic polyarthritis affecting the left elbow and both wrists. There was evidence of mitral endocarditis associated with slight increase in the area of deep cardiac dulness. Five grains of sodium salicylate (without sodium bicarbonate) were given every six hours and an icebag was applied to the præcordium. The patient improved considerably at first, losing his fever, joint swelling, and pain, while his deep cardiac dulness diminished. On Dec. 16th he vomited twice and on the 18th four times. On the morning of the 19th dyspnœa started, the temperature rose to 102° F., and in the evening the note was as follows: "The child's condition very strongly suggests diabetic coma but a trace of urine passed this afternoon contained no sugar. There is marked air hunger but no stridor and he has only this afternoon become slightly blue. Intubation was tried but was of no service. The bladder is not distended although there has been almost complete anuria for 24 hours. The breath smells of acetone and the child lies in a drowsy condition, with the eyes rolled up and the lids half closed, although he can be roused." A few hours after this the dyspnœa ended with the child's life. It is noteworthy that there had been constipation for a few days.

The post-mortem examination revealed no cause for this condition. Old and recent mitral valvulitis was found but there was no great dilatation. The lungs and air passages were normal, as were also the kidneys and brain. The bladder contained a few ounces of urine. There was no obstruction to the urinary channels.

In this case the dose of salicylate was comparatively small but was continued over a considerable period, about ten weeks in all. The constipation and deficient elimination of urine seem to have determined the poisoning by allowing a concentration of the poisonous products. The urine was not in this case tested for acetone, since the full meaning of the symptoms was not realised and as yet the association of this urinary change was not known.

CASE 2.—The patient was a boy, aged seven years. He was admitted to hospital for acute rheumatic polyarthritis and mitral valvular disease. Constipation was troublesome and remained so while he was under observation, the bowels being opened very irregularly and sometimes only after an interval of from 48 to 72 hours in spite of purgatives. Ten grains of sodium salicylate with 20 grains of bicarbonate of sodium were given every two hours for the first six doses and then every four hours. On the day of admission, Nov. 27th, 1904, he vomited twice, on the next day three times, and on the next once. On the 30th he became delirious with air hunger and this delirium was replaced by a deepening drowsiness but did not, however, result in a complete loss of consciousness. The breath was noticed to be laden with acetone. The urine was strongly acid and gave a very pronounced positive reaction in response to the tests for acetone. It also reduced Fehling's solution but did not contain sugar. The salicylate was omitted and one drachm of bicarbonate of sodium was given hourly. 12 hours later the patient was much better, regaining his normal mental state and taking more notice, but was still drowsy. The air hunger had gone. The breath was now almost free from the characteristic sweet odour. The urine was still acid, although the patient had now taken 720 grains of sodium bicarbonate, but was only faintly so. The acetone reaction was less. On the following day he was quite clear mentally and his urine was neutral and without acetone. The bicarbonate was now omitted and the further history of the case was uneventful.

CASE 3.—The patient, a girl, aged seven years, was admitted to hospital on Nov. 10th, 1904, for joint rheumatism and chorea of average severity. Rheumatic nodules were found on the occipital curved lines. There was slight dilatation but no definite endocarditis. She was treated by the administration of 100 grains of sodium salicylate and 150 grains of sodium bicarbonate per diem. On the 11th this was increased to 150 grains of the former and 300 of the latter. On the 13th she began to have air hunger and was restless and delirious and, later, drowsy. On the 14th these symptoms continued. The urine was now very acid in spite of the large doses of bicarbonate of sodium and gave a well-marked acetone reaction. The salicylate was discontinued and one drachm of bicarbonate of sodium was given alone every hour. With the onset of poisonous symptoms the chorea

stopped almost suddenly. As the patient got under the influence of the alkali the poisoning symptoms diminished and the next day she was very much better. After 720 grains the urine became alkaline and no acetone was detected. The further history of the case is one of gradual improvement. While taking the salicylate there was obstinate constipation.

CASE 4.—The patient, a girl aged six years, was admitted on Jan. 23rd, 1905, with a history of acute rheumatism of the shoulder and knee-joints. When examined after admission the joint swelling and pain were no longer present. Ten grains of sodium salicylate with 20 grains of bicarbonate of sodium were given every four hours. She was constipated and from the morning of the 24th until the evening of the 27th the bowels had only been opened once and that by means of an enema. On the 27th she vomited twice and lay very flushed and thirsty with her mouth widely open in air hunger. She was drowsy and slightly delirious. Her breath smelt strongly of acetone and her urine gave a marked positive reaction for that body. The salicylate was immediately discontinued and bicarbonate of sodium, half a drachm hourly, was substituted. 12 hours later—i.e., after taking six drachms of bicarbonate of sodium—the air hunger had gone and the child was happy. The odour had also gone from the breath but the urine was still acid and testing showed still the presence of acetone though in less amount. After another three drachms of bicarbonate had been given the urine was alkaline and the acetone reaction had gone.

CASE 5.—The patient was a girl, aged seven years. She was admitted to hospital on Feb. 9th, 1905, and had been recently discharged from another hospital, where she had been under treatment for rheumatic polyarthritis, nodules, and double mitral disease. There was, on admission, no longer any affection of the joints nor were there any nodules, but the valve condition seemed to be active, the temperature being 103° F. The patient was very constipated. Ten grains of sodium salicylate with 20 grains of sodium bicarbonate were given to her every hour. I examined her on the next evening and being on the alert for these special symptoms, was able to detect an acetone odour in the breath, which led to an examination of the urine, and this I found also contained acetone. There were, however, no associated symptoms and there seemed insufficient excuse for withholding the salicylate. She vomited twice that evening afterwards. On the next morning when I entered the ward I found her the subject of much discussion because of a drowsiness which had gradually developed and which seemed inexplicable. With this there were noisy and deep breathing and a more marked odour in the breath than on the previous evening. The urine now gave a very strong acetone reaction. By the light of the other cases which I had seen, I was able to attribute these symptoms to the salicylate and this was consequently discontinued, half a drachm of sodium bicarbonate alone being given instead, every two hours. This treatment coincided with a gradual return by the patient to mental clearness, whilst the urine became alkaline and lost its acetone reaction after 12 drachms of bicarbonate had been administered.

CASE 6.—The patient, a boy, aged ten years, was admitted to hospital for tonsillitis associated with endocarditis. These manifestations were thought to be rheumatic and he was accordingly treated with sodium salicylate, ten grains being given every four hours and without bicarbonate. After taking 140 grains the urine was tested and showed a definite acetone reaction. There had been no vomiting and there were now no acid-poisoning symptoms. On the next day the intoxication had developed, the patient was dull and difficult to rouse, his breathing was deep and frequent, and there was a definite odour of acetone in the breath and in the urine. He was also extremely thirsty. The urine gave a very pronounced acetone reaction. The salicylate was now omitted and 40 grains of bicarbonate of sodium were given every four hours. Urinary specimens were collected at four-hourly intervals. After 160 grains of alkali had been given the urine was still acid but the acetone reaction had lessened in intensity. After 200 grains the urine at last became neutral and the acetone had gone. This frequent examination of the urine afforded an opportunity to watch the gradual recovery with diminishing acidity of the urine. Before the onset of these symptoms there had been constipation.

CASE 7.—This case is of importance since it occurred at a northern hospital and so shows that a particular brand of salicylate cannot be made responsible for this condition. The house physician to the hospital was a former clerk at the Hospital for Sick Children, Great Ormond-street, and she saw the first case recorded in this paper. She was so struck by the similarity of the two cases that she wrote for an abstract of the notes and so I was able, by the kindness of the physician, to obtain the information in the following account. The patient was a girl, aged four years, who had been suffering from chorea for one month before admission to hospital. There was a history of growing pains but nothing more definitely rheumatic. There was, however, a strong family history of rheumatism. At first she was given 15 minims of liquor arsenicalis three times a day. This was omitted after three days because of vomiting and sodium salicylate, ten grains four-hourly, was substituted. No alkali was given. After three days the dose was increased to 15 grains four-hourly; this was on Oct. 10th, 1904. On the 12th the patient vomited twice and became restless and that night was delirious and vomited twice more. On the next morning she was worse and the salicylate was omitted. She became more troublesome during the day, trying to get out of bed, and was markedly dyspnœic and later unconscious. On that day she vomited twice. At 7 P.M. she was getting more comatose and had definite air hunger. A sweet smell was noticed in the breath. She had been very constipated. The urine contained a trace of albumin but no sugar. It was not tested for acetone. A drachm of castor oil was given to the patient immediately and rectal salines every half hour. 15 grains of sodium bicarbonate were also given. At 8.30 P.M. oxygen was used but had no effect on the air hunger. At 10 P.M. the temperature was 102° F. and the patient vomited again. At 10.30 P.M. ten ounces of blood were removed by venesection, and one and a half pints of normal saline solution, to which were added two drachms of sodium bicarbonate, were injected into the veins. At 2 P.M. the temperature rose to 105° and at 2.55 the patient died. Almost instantaneous rigor mortis occurred. Although the urine was not examined for acetone in this case it is interesting that the odour in the breath attracted attention. There was unfortunately no post-mortem examination.

CASE 8.—The patient was a girl, aged eight years. She was admitted to hospital at the end of January, 1906, with moderately severe chorea which proved intractable to treatment by arsenic. There were no other rheumatic manifestations. On Feb. 9th six-hourly doses of medicine containing 20 grains of sodium salicylate but no sodium bicarbonate were given to her. On the 13th the dose was doubled, bringing the daily dose up to 160 grains. The bowels had not been opened for three days. That night she vomited twice and on the next morning three times. She was then drowsy, the cheeks were flushed, and the eyes were sparkling. She was breathing somewhat deeply, was excitable when questioned, and complained of headache. There was an odour of acetone in the breath. The salicylate was stopped but no bicarbonate of sodium was given. On the 15th the symptoms were rather worse, the breathing being deeper and the drowsiness greater. The patient vomited six times. In the evening one drachm of bicarbonate of sodium was given and this was next repeated on the following morning at 6 A.M. At 10 A.M., although no salicylate had been given for 52 hours, the symptoms had changed but little, and consequently, as in the former cases, bicarbonate was administered in regular doses, ten grains being given six-hourly. Elimination by the intestine was promoted by enemata. 12 hours later the patient was better, no vomiting having occurred. On the next morning she was practically well.

The urine.—On Feb. 14th, at 6 A.M., the urine was very acid and gave a marked acetone reaction. Specimens collected at intervals of 12 hours up to 6 A.M. on the 16th gave the same reaction. At 6 P.M. on the 16th it was less, and on the following morning had disappeared synchronously with the symptoms. After 360 grains of bicarbonate the urine was still acid.

The special interest of this case lay in the fact that, although the salicylate was discontinued, the symptoms increased for 24 hours and then remained constant, rendering the course of the poisoning more protracted than in the former cases. The withholding of the alkali for 36 hours probably explained this, a view supported by the improvement when bicarbonate of sodium was given. This case, therefore, shows that the alkali is a true antidote and that improvement is not merely a question of elimination of the salicylate.

I am greatly indebted to Dr. Willcox who has kindly

examined the urine of this case by more precise methods, an account of which is given in the addendum, by which he has been able to verify my previous observations.

Table showing the Variability of the Dose sufficient to produce Toxic Symptoms.

Case.	Sex.	Age.	Dose in 24 hours, just before the onset of acidosis symptoms.	Total quantity taken before the onset of symptoms of acidosis.	Duration of salicylate treatment.	Dose of bicarbonate of sodium before the onset of symptoms.
1	M.	5 years.	20 grains.	1400 grains.	10 weeks.	None.
2	M.	7 ,,	120 grains for six doses; then 60 grains.	210 ,,	3 days.	Double that of salicylate.
3	F.	7 ,,	150 grains.	400 ,,	3 days.	300 grains.
4	F.	6 ,,	60 ,,	240 ,,	4 ,,	120 ,,
5	F.	7 ,,	240 ,,	360 ,,	36 hours.	480 ,,
6	M.	10 ,,	60 ,,	140 ,,	4 days.	None.
7	F.	4 ,,	20 ,,	360 ,,	5 ,,	,,
8	F.	8 ,,	160 ,,	560 ,,	5 ,,	,,

It will be observed that in the narration of these cases I have adhered as closely as possible to the description of the toxic symptoms which have been noticed and have said nothing about the therapeutic effects of the drug. I assume that it is of acknowledged value in the treatment of rheumatic affections and wish to point out the evidences of poisoning to be looked for in children, so that it may not again acquire the bad name from which Dr. Lees has done so much to free it. It is at once evident that there is a great variation in the amount required to give toxic symptoms, some children being, indeed, on quite small doses, whilst none had the very large doses mentioned at the beginning of this paper. The time to use the drug most cautiously is, therefore, at the beginning of its administration, so that the personal factor may be estimated and any idiosyncrasy detected. Another noteworthy point is that all the patients were constipated before the onset of the symptoms, so that a greater accumulation than usual might well have taken place. Clearly the indication, then, is to see that the bowels are kept well opened while salicylate is being given.

The general similarity of this group of symptoms to those of diabetic coma suggests at once the giving of bicarbonate of sodium as a prophylactic and remedial measure. Very large doses, however, are required to neutralise the urine of patients taking salicylate, as, even when the amount of alkali is twice that of the salicylate, symptoms sometimes arise, as in Cases 3, 4, and 5, and in such circumstances more bicarbonate is indicated. It is far from easy to name the acid which causes the symptoms and its recognition requires a much more detailed examination than I have been able to make. The invariable association of acetone makes it probable that its precursor, beta oxybutyric acid, the poison of diabetic coma, is also the poison here, yet it could not be directly derived from salicylate of sodium. Vomiting, by promoting nitrogenous breakdown, may possibly have intensified the symptoms of some of these cases but it cannot be considered to be their originator since in others it was absent.

The recognition of acetone in this condition is a valuable clinical help, since its excretion in the urine preceded other symptoms in two cases (Nos. 5 and 6), was invariably present in the early stages, and was never present in other cases which showed no poisoning symptoms. It is a danger signal which occurs early enough to allow of efficient treatment.

The objection may be raised that an impure drug is used at this hospital. I have carefully gone into this question and find that chemically it is a pure sample. The melting point is that of the pure salt. Moreover, Case 7 occurred at another hospital and I have seen a very marked example of the same condition in the person of a child taking aspirin. It is likely that in these cases two factors are at work which in some way produce an auto-intoxication: (*a*) the salicylic acid, and (*b*) the diplococcus of Poynton and Paine, which we know to be an acid-forming organism. In favour of the possibility of bacterial influence is the instance of the pneumococcus. Here is again a micro-organism one of the toxic bodies of which is an acid, and in pneumonia acetone and diacetic acid are found in large quantities in the urine. I have examined a great number of specimens of urine from pneumonic children and have come to the conclusion that these products are to be expected only in those cases where the toxic element is marked, where the face is flushed, and where there are delirium and drowsiness and dyspnœa of the toxic rather than of the pulmonary type. I believe that in such cases an acid auto-intoxication is added, giving these symptoms at least in part, as well as the urinary changes.

The following inferences seem justifiable from the study of these cases. 1. Salicylate of sodium sometimes causes in children symptoms resembling the acid poisoning of diabetes. 2. The toxic dose is variable, depending on the idiosyncrasy of the patient and the presence or absence of constipation. 3. Acetone may be detected in the urine and in the breath, its presence constituting one of the first symptoms of the poisoning, and affording a valuable danger signal. 4. Treatment should be directed to keeping the acidity of the urine low and the bowels opened in cases of patients taking this drug. 5. If acetone is found or the urine gets more and more strongly acid the salicylate should be omitted and alkali given alone. If these points are borne in mind I feel sure that further calamities due to salicylate may be avoided. In conclusion, I have to thank those physicians at the Hospital for Sick Children, Great Ormond-street, by whose kindness I am allowed to record these cases.

ADDENDUM BY DR. WILLCOX.

Examination of the urine in Case 8.—Specific gravity 1022; straw-coloured; acid reaction; sugar and albumin absent. A large quantity of salicylic acid in combination was present. The acetone reaction was given in a very characteristic manner. The test was performed in two ways. 1. About five cubic centimetres of urine were taken in a test-tube, half a cubic centimetre of a 5 per cent. solution of sodium nitro-prusside was added and caustic potash (liquor potassæ) added until the liquid was distinctly alkaline (about three drops). A reddish brown colour developed which on the addition of acetic acid became reddish violet. 2. About ten cubic centimetres of urine were placed in a test-tube, half a cubic centimetre of sodium nitro-prusside solution was added, and then a few drops of ammonia solution. After about three minutes a beautiful reddish violet colour developed.

The above tests for acetone are not absolutely conclusive, since urines with excess of creatinin and extractives may give colours somewhat resembling those given by acetone. In order to prove conclusively that acetone was present about 100 cubic centimetres of urine were placed in a distilling flask fitted with a Liebig's condenser. The flask was heated over a Bunsen flame and the liquid was boiled. Steam was then passed through. When the distillate measured about 15 cubic centimetres it was set aside and tested as follows. 1. Ammoniacal silver nitrate solution (5 per cent. silver nitrate solution to which ammonia solution had been added until the brown precipitate which at first forms has just dissolved) was added to a portion of the distillate and the liquid was warmed. No silver mirror was produced. This proves the absence of aldehydes (acetic aldehyde if present would give the iodoform reaction). 2. The tests for acetone with sodium nitro-prusside described above were given in a very definite manner. 3. The distillate was warmed with a few crystals of iodine and sodium carbonate solution until the iodine dissolved and the liquid was a light straw colour. On cooling a well-marked yellow crystalline precipitate showed characteristic stars and hexagonal plates of iodoform microscopically. 4. The distillate gave a well-marked milky precipitate with a solution of phenylhydrazin hydrochloride and sodium acetate.

From the above reactions obtained with the distillate from the urine it was certain that the urine contained acetone and that the positive reactions given by the sodium nitro prusside tests with the undistilled urine were due to the presence of acetone.

Diacetic ether was present. This was shown by taking 15 cubic centimetres of urine in a stoppered cylinder. Sodium carbonate solution was added until the liquid was very slightly alkaline and then 15 cubic centimetres of washed ether were added. The mixture was gently shaken for several minutes, care being taken not to emulsify it. The ether was pipetted off and filtered through a dry filter paper into an empty stoppered cylinder. Another extraction with ether was made in a similar manner and the ether was separated by a pipette, filtered, and added to the previous

quantity. To the ether which contained the extracted diacetic ether, about five cubic centimetres of a weak solution of ferric chloride were added and the mixture was shaken in the cylinder for several minutes. On standing the solution of ferric chloride was distinctly claret in colour, showing the presence of diacetic ether. Since salicylates were present it was necessary to extract the urine with ether in a slightly alkaline solution or salicylic acid would have been extracted by the ether and a colour given to the ferric chloride by it. In alkaline solution no salicylic acid is extracted.

Diacetic acid in the form of the sodium salt was not tested for, since the presence of salicylates would have masked the reaction with ferric chloride and the quantity of urine available was not sufficient for the application of other tests. Since the sodium salt of diacetic acid almost invariably accompanies diacetic ether in urine and occurs in greater amount than the latter body there is little doubt that it was present.

Oxybutyric acid was not tested for owing to the small quantity of urine available.

Conclusion.—This urine contained large quantities of acetone and also diacetic ether. Sugar was not present. Since the acetone was accompanied by diacetic acid, and probably also by oxybutyric acid, it appears that the condition of the urine as regards these bodies is similar to that which occurs in the so-called acid poisoning of diabetes and in cyclical vomiting and other conditions.

THE NATURE OF SURGICAL SHOCK.[1]

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[AFTER some preliminary remarks upon the physiological aspects of the subject, with a demonstration of various instruments used for clinically determining arterial blood pressure and of a number of blood-pressure charts, Mr. Sheen continued:]

Those of us who have held somewhat fairly defined views on the nature of shock must have experienced a considerable confusion of ideas on reading the very conflicting papers of Mr. J. P. Lockhart Mummery[2] and Mr. J. D. Malcolm[3] published last year in THE LANCET and the *British Medical Journal*. Mr. Mummery, calling attention to Crile's work,[4] maintains that the lowered arterial blood pressure which occurs in shock is due to a dilatation of arterioles throughout the body. Accompanying this the veins of the splanchnic area are enlarged so that with a diminished carotid there is a raised portal pressure. Such a condition may be brought about by injury to afferent nerve paths or by exposure or injury of the abdominal viscera. The splanchnic area is the key to the situation. Clamp the vessels supplying it and shock does not occur.

Mr. Malcolm, on the other hand, upholds the view that in shock there is a contraction of arterioles throughout the body. The first effect of stimulation of a sensory nerve is vaso constriction. With prolonged stimulation constriction is prolonged and pronounced. In shock there is no evidence of constriction passing into dilatation, such as flushing of the body surface. The thready pulse, the coldness and pallor of the surface, and the little bleeding from wounds indicate constriction rather than dilatation of the arterioles. We must not assume that a lowered systemic blood pressure always follows arterial dilatation; the more a tube containing fluid contracts the less the pressure within it and if it contracts to absolute closure such pressure will be *nil*. As the shock becomes greater the arterial contraction spreads to larger and larger vessels, hence the lowered carotid pressure shown by a manometer. Clinically, cases are sometimes observed of patients pulseless at the wrist but with a full beat in their carotids. Lister's experiments on frogs many years ago show how almost impossible it is to exhaust the vaso-constrictor nerves. While all the arterioles, including those of the splanchnic area, are contracted the veins of the splanchnic area are enlarged to accommodate the blood which is forced rather than drawn there. These veins do not lose their tone, for if so the individual would die.

Each writer comments on the usual modes of treatment of shock. Mr. Mummery says that alcohol is of little or no value; vaso-dilators are obviously of no use with already dilated arterioles. Repeated doses of strychnine produce shock and if shock is already present aggravate it by hastening the exhaustion of the vaso-motor centres. Saline infusion is beneficial indirectly by increasing the volume of the circulating fluid. The Trendelenburg position and a tight abdominal binder are commended as emptying the blood out of the splanchnic veins. Crile's pneumatic suit is of value by creating an artificial peripheral resistance. One of the strongest proofs of the dilatation of the arterioles is the fact that suprarenal extract or ergot invariably causes a rise of the blood pressure in shock. Mr. Mummery's definition of shock is "the condition resulting from a fall in the general blood pressure due to an exhaustion of the vaso-motor centres."

Mr. Malcolm takes the more usual view that such drugs as alcohol, strychnine, and nitro-glycerine are of value in the treatment of shock; by them the pulse volume is improved and the pallor of the surface is lessened. The vaso-dilators dilate the contracted arterioles. Crile's observation that in profound shock it is difficult to get saline fluid into the vessels and that it soon leaves the vessels for the tissues producing œdema is in harmony with a contracted condition of the vessels, whereas when shock is passing off the vessels are dilating and sucking in fluid from wherever they can get it, so that all methods of introducing saline fluid become of value. Suprarenal extract and ergot are useful because they brace up the dilated internal vessels. Mr. Malcolm's definition of shock would appear to be a condition resulting from a fall of systemic blood pressure due to a general contraction of the arterial system from over-stimulation of the vaso-motor centres. Both writers note the rise in the specific gravity of the blood which accompanies shock. Mr. Mummery gives an explanation which I find it difficult to understand. Mr. Malcolm says that the fluid parts of the blood are squeezed out of the contracted vessels.

Is it possible to reconcile to any extent these opposing views? Any effort will be of value which tends to bring such conflicting ideas into harmony. This must be my apology for the following imperfect attempt. As a result of injury or surgical operation afferent nerve paths are injured. Along these afferent nerve paths stimuli reach the vaso-motor centres, thence efferent impulses arise which reach the walls of the blood-vessels. At first these impulses are vaso-constrictor in nature, the arterioles (which are microscopic arteries) contract and the blood pressure, as indicated by the carotid manometer or by a clinical instrument, such as the Riva-Rocci sphygmometer, rises. At the same time, without losing their tone, the veins of the portal system and possibly other internal veins dilate, the possible factors concerned in this latter process being lessening of vaso-constrictor impulses with vaso-dilator impulses; blood is forced into the veins by the general contraction of the arterioles, and then the veins reflexly dilate because of the increased pressure of the blood within them. However caused, at one and the same moment the systemic arterioles contract and the portal venous system dilates. What occurs in the first stage of shock is comparable to what occurs in fear, in sleep, on exposure to cold, in the later stages of fever, and in other toxic conditions; in fact, to what occurs whenever conditions are present tending to lower vitality. Man is a warm-blooded animal and in such conditions the blood is accommodated in the internal vessels "owing to the physiological necessity for the conservation of heat" (Malcolm). So when injury or anæsthetic or both render the individual motionless with depressed vital powers a similar distribution of blood takes place.

What is the next stage? There are two distinct sets of nerves going to the blood-vessels, vaso-constrictor and vaso-dilator. The first effect of stimulation of any afferent nerve path such as the sciatic nerve is vaso-constriction—a pressor effect. The pressor effect, however, is the more quickly exhausted so that after repeated stimulation we have vaso-dilator impulses reaching the blood-vessels—a depressor effect.[5] May not this be what happens in shock? The vaso-constrictor impulses pass off and vaso-dilator impulses

[1] A paper read before the Cardiff Medical Society on March 13th, 1906.
[2] THE LANCET, March 18th (p. 696) and 25th (p. 776), and April 1st (p. 846), 1905: Hunterian Lectures, Physiology and Treatment of Surgical Shock and Collapse.
[3] THE LANCET, August 26th, 1905 (p. 573), Condition of the Blood-vessels during Shock; Brit. Med. Jour., Dec. 9th, 1905, Remarks on Shock.
[4] Blood Pressure in Surgery, Lippincott and Co., New York.
[5] Leonard Hill: Schäfer's Text-book of Physiology, vol. ii., p. 134, Part 1.

reach the vessels. But they cannot dilate because there is no blood to fill them, the blood being already accommodated in the portal system and elsewhere, so the condition passes from one of contraction to one of *retraction* and the retracted condition remains when with further stimulation the vaso-dilator nervous mechanism is also exhausted. Retraction is contraction followed by relaxation but not by extension. The use of the term originated with the obstetricians who apply it to the condition of the uterus after the child has been delivered and the uterine muscle relaxes. Similarly, one can contract the biceps and keep it actively contracted; then one can relax it, keeping the elbow as fully flexed as before. The biceps is now in a condition of retraction. I suggest that Mr. Mummery and Mr. Malcolm may find common ground by regarding the arterioles and arteries in shock not as dilated nor as contracted but as retracted. In fatal shock the abdominal veins gradually lose their tone and blood collects in them. This stagnation results in insufficient oxygenation and impure blood reaches the vaso-motor, respiratory, and other centres, still further impairing their efficiency, "vicious circles" being established. Less and less blood reaches the brain. The heart hurries because it has less blood to work on and finally with stoppage of the heart death ensues. When recovery takes place on the cessation of the local irritation the vaso-motor centres gradually return to their normal condition and effects comparable to those of suprarenal extract but more gradual are produced throughout the vascular system—i.e., a general bracing-up which gives the heart its proper amount of blood to work on. This, however, must be only one of the many factors operative in cases of recovery.

To recapitulate, we have three stages leading to fatal surgical shock: 1. Pressor impulses reach the vaso-motor centres and are followed by contraction of arterioles throughout the body. At the same time the portal venous system relaxes. Both the arterial and the portal pressures are raised. 2. Depressor impulses reach the vaso-motor centres, the arterioles throughout the body relax but do not dilate because there is no blood to fill them, remaining in a retracted condition. The arterial blood pressure falls. 3. The veins of the portal system and possibly other internal veins lose their tone. All the blood in the body collects in them and death follows.

Let us see how these views fit in with the clinical and experimental evidence. In an operation of little severity, such as the radical cure of an inguinal hernia or the removal of the appendix in an uncomplicated case, there is no shock clinically speaking, any slight fall of blood pressure which takes place being attributable to the general lowering of the activity of the nervous centres by the anæsthetic. After severe injuries it is a matter of frequent experience that for a short but variable period there are none of the ordinary clinical evidences of shock. One sees a patient—say, one with a severe injury to both lower limbs—conscious, rational, with good pulse, smoking and talking immediately after his injury, although in one or more hours he may manifest the most severe symptoms of shock. In operations this preliminary stage is shortened or obliterated by the anæsthetic. Chloroform always lowers the blood pressure. Ether does not appear to raise it. Still in most operations the initial effect is a rise of blood pressure and this is most marked when sensory nerves are vigorously stimulated as in stretching the sphincter ani. Experimental evidence agrees with this.

The evidence of the next stage is found in the lowered arterial pressure which we observe clinically with the sphygmometer. In abdominal operations there are various factors which may be productive of shock. Not only is there the irritation of afferent nerve paths, but also the removal of the support of the abdominal wall and the direct irritation of the abdominal nerves. The observations, I think, of the majority of surgeons, with which my own coincide, are that in abdominal operations there is no evidence of dilatation or engorgement of arteries or arterioles but that the veins in the abdomen are full of blood. Clinically we note the remarkable action of intravenous injection of suprarenal extract in bringing the blood pressure of a pulseless individual up to 180 or 190 millimetres of mercury—i.e., considerably above the normal—with correspondingly full pulse. This is explained by the tightening action of the drug on the vessels throughout the body, arteries and veins alike. In fatal shock, unless higher nervous structures are involved, consciousness persists almost to the last and the heart, of course, beats to the last.

Before concluding may I plead with the physiologist to come to the aid of the clinician in this very difficult problem? Physiological treatises do not neglect "shock" but their interpretation of the term differs from the clinician's. In a leading text-book[6] we find—"'Shock'..... a term more used by the physician than the physiologist ..... a term somewhat ill-defined in scope. In some forms of the clinical condition circulatory disturbance and inspissation of the blood play a part, but as understood by the physiologist 'shock' is primarily a nervous condition." After this somewhat contemptuous dismissal of the clinical interpretation of the term rather more than two pages follow dealing with "shock" as the result of various modes of transection of the spinal cord. I can imagine the confusion of the medical student who passes from the "shock" of the physiologist to the "shock" of the surgeon. Here, as in other matters, considering the needs of the great majority of those they instruct, physiologist and clinical teacher should strive to be in accord. Through his special opportunities and his special experience the physiologist is in a most favourable position to undertake the solution of the many problems connected with "shock" and practising members of the profession naturally look to him for the help they need.

Many other factors—cardiac, respiratory, nervous, and toxic—doubtless play their part in the production of the complex condition known as surgical shock and some of these aid in recovery from it. On this occasion I have not attempted to deal with them or with many other points connected with the subject; nor do I pretend that in any way I have given a complete explanation of the condition. My only wish has been to try to throw a little more light upon the matter and particularly to suggest a means of reconciling the divergent views of the two gentlemen who have recently pronounced so ably and so fully on the subject and to whose writings I have been so greatly indebted in the preparation of this paper.

Cardiff.

A CASE OF CANCER OF THE ŒSOPHAGUS COMMUNICATING WITH THE RIGHT BRONCHUS IN WHICH THERE WAS A COMPLETE ABSENCE OF THE USUAL SYMPTOMS.

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IN THE LANCET of Oct. 18th, 1902, p. 1039, Dr. J. G. Emanuel of Birmingham contributed an article on Cancer of the Œsophagus without obstruction, the article being based on a description of six remarkable cases which were treated at the City of London Hospital for Diseases of the Chest, Victoria Park, E., in the years 1897 to 1899 inclusive. In all these cases dysphagia was either altogether absent or else it was obscured by other more prominent symptoms. The following case is remarkable because, not only were there no symptoms of œsophageal obstruction, but there was also a complete absence of the symptoms of a broncho-œsophageal fistula, though the communication between the tubes must have existed for some time before death. It was only at the post-mortem examination that the true nature of the disease was revealed.

A man, aged 55 years, was admitted to the Westminster Hospital on Oct. 30th, 1905, complaining of cough, shortness of breath, and pains in the joints. The only point of note in the family history was that one brother had died from pulmonary tuberculosis. The patient gave a history of scarlet fever at the age of 21 years and for the last four or five years he had suffered from a cough in the winter. In the year of admission the cough had commenced in June—that is, earlier than usual—since when it had been continuously present. There was no history of hæmoptysis, but for some time prior to admission the patient had been losing flesh considerably. He had been confined to bed since July with what he called "pneumonia and pleurisy" and had complained of pains in most of the joints. The cough became very severe and occasionally caused slight vomiting.

[6] Schafer's Text-book of Physiology, vol. ii., p. 845.

On admission the patient was found to be considerably wasted and had a flush on each malar eminence. The temperature on the evening of admission was 101·6° F.; for the first week it was usually about 99° in the morning and about 100° in the evening. There was a frequent loose cough, accompanied by much frothy expectoration, most of which was mucoid in character, but some was muco-purulent. There was also considerable dyspnœa even on lying down and the respirations were quickened. On physical examination all the signs of a considerable degree of emphysema were found; loud rhonchi and some bubbling râles were heard all over the chest, back and front; the pulse was 100 per minute and regular; the apex beat of the heart was palpable in the fifth interspace half an inch within the nipple line; the superficial cardiac dulness and the heart sounds were largely obscured. There was marked clubbing of the fingers. The patient complained of pain in the left shoulder as well as in the knees and hips. The shoulder-joint was kept fixed, the movements both active and passive being *en masse* with the scapula. The knees and hips were kept flexed in bed, so that daily passive movements were necessary to prevent contractures. The bone ends were very prominent and easily felt owing to muscle wasting but no changes were distinguishable; this was confirmed by the skiagram. There was no evidence of excess of fluid in any joint. The urine was normal. An examination of the sputum for tubercle bacilli was made, with a negative result. The cough and rheumatic pains became less troublesome and the patient made satisfactory progress. About the third week after admission the evening temperature began to rise, until by the end of that week its average was about 101° in the evening and 99° in the morning. On Dec. 1st the patient was flushed, weak, and very wasted. He still complained of pain in the left shoulder and both knees. He was taking fish diet with relish and slept well. The cough was frequent, free, and most severe in the early mornings but bore no relation to movement or to food. The expectoration was profuse, being about three-quarters of a pint in the 24 hours, was frothy, and some was muco-purulent and very slightly nummulated; there was no blood. Rhonchi and bubbling râles largely obscured the sounds all over the chest. Over the right base posteriorly, extending as high as the sixth dorsal spine, there was deficient expansion, the percussion note was impaired, and the breath sounds, as well as the adventitious sounds and vocal resonance, were diminished. The tactile vocal fremitus was doubtful. No cardiac or visceral displacement was made out. As the impairment at the right base became more marked the chest was explored on the 11th and a little clear fluid was withdrawn which on microscopical examination revealed leucocytes, red blood corpuscles, and degenerated endothelial cells. A second microscopical examination of the expectoration was made on the 18th; neither tubercle bacilli nor elastic fibres were found. On the 28th the patient was noticed to be progressively wasting and becoming weaker; there was some decrease in the number of rhonchi and râles but the condition at the right base was unaltered. The chest was explored, with a positive result, and aspiration succeeded in drawing off from three to four ounces of clear fluid. Microscopical films revealed small numbers of diplococci; the cultures were sterile. On Jan. 5th the weakness and wasting were found to be steadily progressing and the patient was confined entirely to bed. On the 16th he was not taking solid food simply because there was such a marked loss of appetite but there was no difficulty in, or pain on, swallowing. On the 23rd the physical signs of the lungs were unchanged. On Feb. 1st the patient, after getting daily weaker, died without further change in the physical signs at 6 P.M.

On post-mortem examination there was found in the anterior wall of the œsophagus, at the level of the tracheal bifurcation, a malignant ulcer, two and a half inches in diameter, with hard white raised edges and a sloughing base which had perforated, by a large aperture, the right bronchus near its origin. The perforation had the appearance of having existed for some time. The growth had given rise to no œsophageal constriction. There were a few infiltrated glands in the neighbourhood but the tracheal glands were normal. The two layers of the pleura were thickened and adherent over the lower lobe of the right lung. The lungs were emphysematous and the right lower lobe was consolidated and showed much septic bronchopneumonia which was evidently not recent but of some standing. The remaining lung substance was œdematous. All the signs of chronic bronchitis were present and there was a small loculated semi-calcareous empyema between the pericardium and the pleura. The liver weighed 62 ounces, was firm, and in the substance of the right lobe several nodules were present, the largest being an inch in diameter, non-encapsulated, and having a sinuous border. One small white nodule was seen on the surface of the organ. No other metastases were discovered. The right knee-joint was enlarged but on examination no anatomical abnormality was found. Death was due to cachexia and pneumonia. On microscopical examination the growth proved to be carcinomatous.

It will be observed that from the time the patient came under observation to the time of his death there were no difficulty in, or pain on, swallowing, no regurgitation of food, no pain in the thorax or epigastrium, and no fœtor of the breath, the voice was quite normal, and there was a complete absence of paroxysms of coughing and dyspnœa on attempting to swallow or after taking food, though food material must undoubtedly have reached the lungs, since the communication between the œsophagus and the bronchus must have existed for some time before death. From the first to the last the patient swallowed perfectly comfortably and naturally and there was a complete absence of symptoms. It is true that there was expectoration of a large quantity of frothy liquid but this was thought to be due to the fact that the patient had very severe chronic bronchitis. Lebert long ago pointed out that a perforation of the air passages does occasionally not reveal itself until the necropsy, but on looking through most of the literature on the subject I have been unable to find any case in which the œsophageal growth and the broncho-œsophageal fistula were completely silent. Not only did the patient not voluntarily complain of any symptoms of either condition, but as no satisfactory diagnosis was made the case was most carefully watched from day to day for any symptoms likely to throw further light on the case. There is just a possibility that the presence of chronic bronchitis, with its associated atrophy of the mucous membrane, had something to do with the absence of symptoms of broncho-œsophageal fistula.

We are indebted to Dr. W. Murrell for being allowed to publish this case and to Dr. R. G. Hebb for the use of the post-mortem records.

LOCAL ANÆSTHESIA AND ANÆSTHETIC AS EMPLOYED IN DENTAL EXTRACTIONS, RHINOLOGICAL AND MINOR OPERATIONS.

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IT is with great diffidence that we add to the already large number of local anæsthetics now in use for dental extractions and minor surgical operations. We have had such uniformly satisfactory results with the one we employ that it is with this view only that we wish to bring it to the notice of those interested in such work. For more than two years the investigation of this local anæsthetic has been carried on and with many trials and errors before we obtained the desired results. The number of substances which have been found to possess more or less well-marked anæsthetising properties reaches some hundreds, and hence it is obvious that the action cannot have a different explanation in each case but rather depends upon some general type of interaction between the anæsthetic and the active part of the cell—that is, the cell protoplasm. Further, the action occurs not only with nerve cells but with ciliated and other epithelial cells, with muscle cells of all types, with bacteria, amœba and other unicellular organisms, and with all types of vegetable cells in which activity is suited to experimental demonstration. The anæsthetic as originally made consisted of four solutions which were mixed at the time of operation, but

latterly of two solutions. It must be distinctly understood that the quantities given below are for small quantities as originally prepared, although of late we have made much larger quantities. The final preparations decided upon and developed in the laboratories of Messrs. Oppenheimer, Son, and Co., Limited, and the particulars given in the protected process are as follows:—

Solution 1 consists of 0·3 per cent. solution of cocaine hydrochloride in sodium sulphate (pure)—i.e., free from chlorides, &c.—this solution to be of a specific gravity from 1025 to 1029. A few crystals of pure salicylic acid (not synthetic) as a preservative to the cocaine solution are added to prevent development of moulds. The most minute quantity of salicylic acid is sufficient for this purpose. This cocaine-sodium-sulphate solution of specific gravity 1025 is put into accurately glass-stoppered bottles and retains its properties indefinitely, whether exposed to light or not. The reason for using sodium sulphate in preference to other neutral salts and of this specific gravity will be given later.

Solution 2 is the distilled liquor hamamelidis and not the British Pharmacopœia extractum hamamelidis liquidum. It was found that better results were obtained with the introduction of this substance, especially in dental work. Equal volumes of Solutions 1 and 2 are now placed in one bottle which we call X.

Solution 3 consists of serum albumin which is obtained from the whites of eggs (hens). Egg white is composed of serum globulin and serum albumin, the globulin being precipitated by half saturation with a solution of pure ammonium sulphate and filtered, the filtrate of serum albumin in ammonium sulphate coming through as a clear limpid liquid of a pale straw colour and of a specific gravity of 1040–1050. It was found inadvisable to inject a liquid of this specific gravity into the tissues, so this solution of serum albumin is brought down to a specific gravity of 1030 by adding some sterilised water. By the addition of 0·5 cubic centimetre chloroform (pure) to 100 cubic centimetres of Solution 3 it keeps indefinitely. The chloroform has now been dispensed with and instead we use a crystal of thymol which floats on the surface of the liquid. We suggest that this Solution 3 should be filtered through a Pasteur-Chamberland or d'Arsonval filtering apparatus, either by pressure or into a vacuum; in this way it could be obtained sterile.

Solution 4 is the active principle of the suprarenal gland in solution 1 in 1000. At present Messrs. Oppenheimer, Son, and Co. put up Solutions 1 and 2 together and 3 and 4 are supplied separately to be mixed as required in the same bottle. We call this X 2. This solution gives a deposit if kept exposed to the light, but when sterile and placed in amber-coloured bottles and kept away from the light it keeps good for some time. Various salts and solutions have been used but up to the present the sodium and ammonium sulphates have given the best results. They must be obtained chemically pure. They are neutral in reaction and diffuse with rapidity into the various tissues injected, being isotonic with the various body fluids. Solutions of various specific gravities have been tried, some above 1045, with the idea of inducing pressure ischæmia, but owing to the excessive interstitial pressure produced œdema resulted which took some time to disappear. The pain was not so completely abolished but the hæmorrhage was practically *nil*; in those cases where oral sepsis was very marked sore mouths resulted. After this solutions of specific gravity not above 1030 were employed and with most satisfactory results from all points of view; this specific gravity is just above that of the blood plasma (from 1025 to 1028). The percentage of cocaine in the sodium solution is about 0·3 per cent. The reason that pure sodium sulphate is used in preference to other salts is that it greatly enhances the penetrating power of the cocaine by diffusing rapidly into the albuminous elements of the tissues. The anæsthetic effects of this combination are equal to that of a 10 per cent. solution not thus fortified. The danger of constitutional symptoms is thus lessened, and the use of this remedy attended with less expense, a fact worthy of consideration in institution practice. The serum albumin is added as being a natural constituent of the body fluids and hence isotonic with them, and approximately of the same specific gravity and very diffusible. We tried serum obtained from ox and sheep, but had to give it up owing to the persistent hæmorrhages. As said above, the sodium sulphate greatly increases the penetrative power of cocaine, but the serum albumin delays its passage or absorption, or in other words it lengthens out its anæsthetising properties.

It has been found by extensive trial that the local anæsthetic should have a specific gravity of not higher than 1030 and not lower than 1025. The best results were obtained within these limits. Three syringefuls of 20 minims each can be injected with safety and in this 60 minims only half a grain of cocaine is given. With 40 minims from four to five teeth can be extracted without pain or hæmorrhage. Roots can be elevated. The state of "bloodlessness" soon passes off and the socket fills up with blood which coagulates and serves as a "plug." It must be remembered that a good deal of the solution when injected may be lost through faulty syringes or squirting of solution backwards along the track of the needle. It will be found unnecessary to wait as one can operate as soon after injection as one likes. If anæsthesia of a moderate area is desired the diluent should be the serum albumin; it is unnecessary to increase the volumes of the other solutions. We have removed with this local anæsthetic a sebaceous cyst of the size of an orange from the back of the neck. This took quite 15 minutes to excise; the sites of the injection being around the base of the tumour. Also we have undertaken the rectification of deflected septa, removal of inferior turbinates, nasal spurs, tonsils, ganglions, "opening abscesses," &c. The best method of injection one soon learns and acquires by practice. For teeth the needles should be inserted into the gum on the buccal and lingual surfaces if the interdental space does not allow of it. When the piston slips easily anæsthesia will not be effective; it is always better to experience a little resistance when injecting and it will be noticed that the surrounding gum becomes of a livid white colour; as soon as this occurs extraction can be proceeded with without pain or hæmorrhage. In removal of turbinates and tonsils longer needles should be used and plunged into these bodies.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A SOMEWHAT UNUSUALLY PROLONGED CASE OF "POSTPONED ABORTION."

BY JAMES OLIVER, M.D. EDIN., F.R.S. EDIN., F.L.S.

Mr. H. E. Watts of Ilford sent the patient, who was then the subject of the above condition, to see me on March 31st, 1905. She was 26 years of age and had been married on Sept. 15th, 1904. Two days after marriage she menstruated as usual but on the next occasion the menstrual discharge was more profuse than usual. From Oct. 19th, 1904, the date on which the second menstruation ceased, until Jan. 10th, 1905, there had been complete amenorrhœa. A small amount of blood flowed from the vagina on Jan. 10th, but there was no recurrence of hæmorrhagic discharge thereafter until Feb. 10th, and after this date, and until I saw her on March 31st, she had noted a somewhat coffee-coloured discharge nearly every day. During November and December she had morning sickness but did not complain of this symptom thereafter. She had occasionally observed a little abdominal discomfort but practically had had no pain.

With regard to the physical signs the following record was made on March 31st: "Palpation of the abdomen reveals nothing to note. There is nothing to remark about the appearance of the breasts and fluid is not obtainable from either of them. The cervix uteri, which is slightly elongated, is bent somewhat forward on itself. It is not soft and the os is not open. The body of the uterus, which is located anteriorly, is enlarged, the size being equal to that of a ten weeks pregnancy; everywhere it is of a doughy consistence."

The diagnosis then made was: intra-uterine death and undue delay in the occurrence of abortion. As nature with a little guidance invariably completes cases of the aforesaid kind more satisfactorily than art can[1] I advised Mr. Watts to give his patient a mixture containing chloride of calcium

[1] See a paper of mine entitled "Early Intra-uterine Death with Undue Delay in the Occurrence of Abortion Thereafter" in the *New York Medical Journal* of Dec. 3rd, 1904.

and strychnine and to await events naturally. This he did, but the product of conception *en masse* was not expelled until Nov. 2nd, 1905. The embryo had evidently perished early in January, when it was about ten weeks old, but gestation was only terminated towards the middle of the thirteenth month, i.e., on the 379th day after the cessation of the last menstruation.

Gordon-square, W.C.

TWO CASES OF ANENCEPHALY.

BY R. BROOKS POPHAM, M.R.C.P. EDIN., L.R.C.P. LOND.

SOME time since I attended two consecutive cases of labour within 24 hours, the result in each of them being a birth of this type of monstrosity. As a contribution to the general question of the frequency of fœtus anencephalus the details may be worthy of record. The following are extracts from my case-book and the clinical history seems either coincidental or, in one or more points, significant.

In the first case the mother was 35 years of age, was in her second pregnancy, and was delivered in the eighth month. Her first child was hydrocephalic and the present one was anencephalic. Hydramnios and uterine inertia were present. The father had children by a previous wife, one markedly hydrocephalic and another with spina bifida. In the second case the mother was 32 years of age, had three healthy children, and was delivered in the eighth month. Uterine inertia and excessive hydramnios were noted. The part which presented was the face. The mother had been frightened in early pregnancy by seeing a child with "a very large head" at Great Ormond-street Hospital.

In both the above cases the births were premature, hydramnios was present, and both mothers were over 30 years of age. The fœtuses had forms of talipes. The family history in the first case is significant, for it would seem as though the father had a special tendency to generate children with nervous defects. How often do we notice this tendency—apart from the subject of anencephaly—to beget children with abnormalities of the cerebro-spinal systems so marked as to be of etiological import, and I should be pleased to know if the apparent tendency in the case quoted equally constitutes a bearing on the fœtus anencephalus.

Argyle-road, West Ealing, W.

A CASE OF IDIOSYNCRASY OF THE SKIN IN REGARD TO MERCURIC CHLORIDE.

BY ROCCO BELLANTONI, M.D.

THE patient whose case is here described was an Italian girl, 20 years old, very robust, and of a healthy constitution. She suffered from a subaxillary abscess which I incised. For the disinfection of the skin I used, in accordance with my constant practice, washing with a solution of mercuric chloride of strength 1 in 1000 and I employed less than one litre of the solution. The local treatment was very simple, sterilised gauze wet with the same solution being in contact with the skin and covered with dry sterilised cotton wool and a bandage. When I saw the patient on the next day I found that the skin of the entire axilla, of the subaxillary region, and of a portion of the adjacent lateral anterior and posterior regions of the thorax was of a scarlet colour and dotted all over with small vesicles containing pus. The girl complained of a sensation of smarting and severe itching. The lesion was very similar to a burn of the first degree. The affected region corresponded exactly to the area which had been in contact with the corrosive sublimate even for a brief period. The same lesion also existed on part of the anterior and posterior aspect of the axillary folds where gauze sterilised and wetted with the solution of corrosive sublimate had been applied. The girl told me that several years ago she had suffered in the same way from the use of a solution of mercuric chloride employed by a medical man and that he was surprised at the effect produced. Three days afterwards the abscess was almost healed but over the whole of the affected surface there was subsequent exudation of a serous fluid mixed with a very small quantity of pus. From the first appearance of the lesion I made no further use of sublimate or any other disinfectant. I only washed the parts every day with sterilised water and cotton wool and then covered them with sterilised gauze and cotton wool. Powdered bismuth subnitrate was also sprinkled upon the skin and sterilised gauze and cotton wool were applied. The lesion disappeared in a few days.

New York.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

RADCLIFFE INFIRMARY, OXFORD.

A CASE OF MUSCULAR ATROPHY, WITH "STOCKING-GLOVE" ANÆSTHESIA, SHOWING GRADUAL IMPROVEMENT.

(Under the care of Dr. W. COLLIER.)

FOR the report of the case we are indebted to Mr. H. C. Lecky, late house physician.

The patient, a man, aged 20 years, was admitted to the Radcliffe Infirmary, Oxford, under the care of Dr. W. Collier, on Nov. 18th, 1905. He was sent in for paralysis of the arms and legs of about 12 months' duration. When first seen he was a healthy-looking man, well nourished, and not at all thin or emaciated. He was lying flat in bed and was quite unable to raise himself. He could not even get his shoulders off the bed. He could with difficulty roll himself over. When the upper part of the body was stripped no *obvious* wasting of any group of muscles was detected. The shoulders could be shrugged. In certain positions the arms could be voluntarily bent but he could not extend them again. The fingers could be moved slightly. The patient could not grip at all with either hand. The thenar and hypothenar eminences seemed to be a little flat. The interossei were not appreciably wasted. The legs at first sight did not show any obvious and marked wasting, although the thighs looked somewhat thin. The thighs could be weakly flexed on the abdomen but there was very great difficulty in extending them again. At the same time it was observed that the patient could exert, to a certain extent, more strength the more he was opposed. There was fairly good movement of the ankles and toes. The chest expanded well. The abdominal muscles seemed to be weak and the abdomen did not move well on inspiration. Sensation was tested with cotton-wool, a pin, and hot and cold water in test-tubes, with the following result. Tactile sensation in the arms was perfect, but painful stimuli and hot and cold stimuli were not felt at all below a circular line drawn round the shoulder-joint. Tactile, painful, hot, and cold sensations were all completely absent below a circular line drawn immediately above the patella. Sensation over the rest of the legs and the whole of the body was perfect. As regards the reflexes, the elbow, wrist, knee, and tendo Achillis jerks were all absent. The cremasteric reflex was brisk on both sides. The abdominal reflexes were absent. Plantar stimulation gave no definite response on either side. No attempt was made at patellar or ankle clonus. There was no evidence of affection of any of the cranial nerves. There was no nystagmus, although the eyes did not fix well on looking to the extreme right. The fields of vision and the fundi were normal. The pupils were equal and active. The small muscles of the face acted well. There was no wasting of the tongue or difficulty in swallowing. The palate acted normally. The temperature, pulse, and respiration were normal. Arterio-sclerosis was not present. There were no physical signs of disease in the chest or abdomen. The testicles were extremely small and rather hard but apparently the normal sensibility was retained. The patient stated positively that they had been at one time much larger and had only become smaller during his illness. The penis was not proportionately small and it was stated that erection was possible. There was no evidence anywhere on the body either of acquired or congenital syphilis. The mental condition was perfectly clear and the patient could give a

rational account of himself, the facts of which were corroborated subsequently from various sources.

History of the illness and past history; family history.—The patient was the fourth child in a family of seven. The eldest son died at the age of 27 years in Canada, the cause being unknown. The remaining five, two sons and three daughters, were alive and well and two of the daughters were married. The father (aged 53 years) committed suicide in 1905. The mother died in 1889; the cause was unknown. The paternal grandmother was alive and well. No history of a similar illness in any other branch of the family could be obtained. There was no history pointing to any inherited neurotic element, except possibly the instance of the father's suicide. The patient joined the army (Light Infantry) in July, 1903. He was always a perfectly healthy boy and had never had any serious disease, except scarlet fever at the age of seven years. He had never had diphtheria. He denied ever having had a chancre or any discharge from the penis. He was in his usual good health up to the beginning of November, 1904. He then noticed for the first time that he had some difficulty in putting his coat on. He also found that he could not use his rifle properly, as he was unable to hold it at his shoulder for any length of time. This was corroborated by the regimental authorities later. After a short time he was reported sick and was sent into hospital on Dec. 7th, 1904. He was in hospital till Jan. 13th, 1905, but was readmitted on Feb. 24th. He was invalided home on May 29th. When the patient was discharged the case was considered to be "probably infantile paralysis." He had loss of muscular power generally but especially in the shoulders and upper arms. The knee-jerks were almost absent. The condition varied but had become worse before discharge. While in the Military Hospital part of the treatment was massage and electricity. The patient lived with a married sister from May to October, 1905. She stated that when he first went home he did not seem at all strong. He could not raise himself up easily or move about quickly. After he had been at home a few weeks he improved and was able to go out and do a little work. He could not do much and often complained of his legs and arms aching. He did not have to stay in bed and was always able to dress and to feed himself. As the weather got colder the general weakness returned. His hands used to swell at times. It seemed difficult for him to lift anything, even a teacup. He was very slow and whatever he had to do took him a long time. In October, 1905, he went into the workhouse at Abingdon and Dr. E. V. Russell Woodford very kindly gave the following information. "His legs appeared to be weak and there was certainly some wasting of muscles. The arms were very much weaker than the legs. He could with difficulty feed himself and he was unable to dress himself. In a very short time he was unable to walk and to feed himself. There was also marked anæsthesia. He was unable to feel a needle with his arms or legs. Unless the battery was applied at full strength he could not feel it." The patient remained in bed at the workhouse until Nov. 18th, when he was sent to the Radcliffe Infirmary.

Progress while in Radcliffe Infirmary.—For the first ten days the patient was kept in bed. He had to have everything done for him and had to be fed. On Nov. 29th Mr. Lecky got him out of bed and put him in a chair. He was able to sit upright but was unable to raise himself from the sitting to the upright position. He literally had to be lifted up but when up could stand fairly well and could walk up and down the ward without assistance, although any little irregularity in the ground made him fall. He fell like a log without any attempt at saving himself. From this date onwards he was encouraged to do as much as he could. He was made to get up every day and was told that he would get quite well again before long. He was given a placebo twice daily. The patient showed slow but continuous improvement. In the middle of December it was found that tactile sensation had disappeared from the arms and was as completely absent as the temperature and painful sensations. The altered areas of sensation were limited by a sharply defined circular line round the shoulder and knee-joints as on admission. In the beginning of January, 1906, it was found that the patient could feel in his legs and arms. On testing absolutely normal sensation was present in the four limbs. By the beginning of February the patient was just able to raise himself from the sitting to the erect posture if the legs were fixed against some stationary object. When once up his gait was practically normal. He could help to feed himself but could not cut up his food and could only get it to his mouth by lowering his head. He continued to make slow improvement and was sent back to the union on Feb. 21st.

Further details of the muscular atrophy.—On admission the muscles of the neck, including the upper part of the trapezius, were well developed and responded normally to weak electrical stimulation. The platysma was well developed. The deltoid on both sides was extremely wasted and was very weak and flabby. The arms could not be raised to a right angle. If they were lifted into that position and the support removed the arms fell at once to the side. If the arms were held out at a right angle and the patient was told to pull them down the latissimus dorsi, teres major, and pectoralis major were all used to a certain extent, but it was easy to resist them. The rhomboids were acting well but the supra- and infra-spinatus muscles were weak and a little wasted. The upper part of the pectoralis major was weak. All the muscles of the arms were weak. Those of the upper arm were very weak indeed and felt quite flabby; those of the forearm and hand were better developed and had more strength. In fact the muscles of the upper extremity showed a gradual increase of weakness; those of the hand being stronger than those of the forearm, the forearm muscles stronger than those of the upper arm, and the shoulder muscles, especially the deltoid, being the weakest of all. The two sides were practically symmetrical and no marked difference in strength was observed between the two. There was no wrist drop. The flexors were weaker than the extensors. When the arm was hanging down the patient was unable to flex it at all but if it were flexed for him the triceps was just able to extend it. Similarly the hands and fingers could not be flexed when he was first seen, although if put into that position they could be extended. The lumbricales practically could not act at all. Adduction of the thumb and little finger could not be performed, although both could be abducted slightly. As regards the legs, the ilio-psoas was very weak but did act on both sides. The glutei were fairly well developed. The quadriceps on both sides were weak and flabby as was also the hamstring group. Here again flexion was weaker than extension and the quadriceps group acted better than the hamstrings. The adductors of the thigh were weaker than the abductors. The lower legs were better developed and were stronger than any other parts of the four limbs. There was no hypertrophy—apparent or real. Dorsal flexion of the ankle was a little weak but plantar flexion was fairly strong. There was no wasting of the erector spinæ. Some of the muscles showed fibrillation. All the wasted muscles responded to a faradic current, but the more weak they were the stronger current they required. The sterno-mastoid and upper part of the trapezius, which seemed to be normal muscles, responded to a very much weaker current than did any of the muscles of either upper or lower limb.

On discharge the patient was able to use both deltoids, so that he could raise his arms to a right angle, but could hold them there for a few seconds only. All the other shoulder muscles had improved in proportion. The biceps and triceps were still very weak. If the arms were held a little distance from the body he could use the biceps sufficiently to flex the arm. This he was unable to do on admission. He could flex and extend the wrists but not against any pressure. The grips were extraordinarily feeble. The lumbricales and interossei were acting fairly well. The triceps and supinator jerks were just present. Sensation was normal and coördination was good. The ilio-psoas and the muscles of the thigh had improved a good deal. The patient was now able to raise himself from the sitting to the erect posture, but there was some difficulty in doing so. The lower leg muscles had not altered very much. On one or two occasions the knee-jerks had just been obtained on both sides with great difficulty. They were generally completely absent. The electrical changes taken shortly before discharge by Dr. A. G. Gibson showed C.C.C. greater than A.C.C. in most of the wasted muscles. As before, the sterno-mastoid and other normal muscles in the neck reacted to a much weaker stimulus than the wasted muscles, which required very strong currents to obtain any reaction at all.

On March 26th, 1906, Mr. Lecky saw the patient and made the following notes: "The patient appears to be a perfectly normal healthy man and can perform any voluntary movement with his arms and legs. From observation only it would be impossible to say that there was any paresis, but on testing his power the paresis is at once evident. He

is unable to approximate the tips of his thumb and little finger in either hand. He can bring the tips of the other fingers together. He is able to write a letter and can feed himself without trouble. His grip is still very feeble but much better than on discharge from the Radcliffe Infirmary. The biceps and triceps cannot oppose more than a very slight resistance. The deltoids show a marked improvement and are much stronger than the biceps and triceps. He can get up from the sitting posture without difficulty. The leg muscles show immense improvement in strength. The knee-jerks are now *quite brisk* and equal. The tendo-Achillis jerks are present and equal. No definite response to plantar stimulation. The arm-jerks are not obtained. Skin reflexes are normal. Sensation is normal. The testes are unaltered."

Remarks by Mr. LECKY.—As regards diagnosis the points to be explained are: 1. Muscular wasting and extreme weakness, bilateral and symmetrical, in definite groups of muscles, with absence of tendon reflexes. 2. Alterations of sensation, the "stocking" and "glove" anæsthesia in the extremities. 3. The slow and insidious onset in a young healthy man, neither neurotic nor hysterical. 4. The gradual improvement of the wasting and the cure of the anæsthesia with the help of exercise and mental treatment only. No massage or electricity and no potassium iodide, mercury, or strychnine were used. 5. The atrophy of the testicles.

The diagnosis of functional disease will explain many of these points but not all.

1. If the wasting were simply due to want of use it is probable that groups of muscles could not be picked out so perfectly as they were in this case. The wasting would have to be far more general. The absence of the deep reflexes in functional disease is very unusual.

2. The explanation of "stocking" and "glove" anæsthesia seems at present to be impossible except as a functional disturbance. Mr. Barker, however, gives diagrams in his work on the central nervous system showing this form of anæsthesia as evidence of "central" disease. In the present case there is no other single sign which could possibly be ascribed to central disease. No disease of the nerve trunks could in any circumstances produce such a condition. But a disease of the actual nerve terminations in the skin might spread evenly up the leg and give a circular anæsthesia. The dissociation of anæsthesia in the arms, which was present on admission but which in a fortnight turned into complete anæsthesia to all forms of stimuli, the complete anæsthesia in the legs, both conditions sharply limited by circular lines drawn round the limbs, and the sudden return to a normal condition a month later, are points that are best explained by some perversion of function not due to organic disease.

3. The slow onset of the disease in a young soldier and the steady increase of the symptoms while under observation in a military hospital where probably malingerers are quickly found out, and especially the fact that the case was diagnosed as "probably infantile paralysis," are all points rather against an entirely "functional" origin. The father was a heavy drinker all his life and committed suicide at the age of 53 years. In spite of the rest of the family history being so good, this fact is sufficient to suggest some instability of the central nervous system in one or more of the children.

4. Because the true muscular atrophies have not been known to clear up the fact that in one case of a rare disease improvement is being shown does not altogether negative some organic cause. Still less does the fact that improvement occurred under suggestion and exercise only, negative an organic cause. The various forms of peripheral neuritis will probably all do the same if given time. The case differs from a primary muscular atrophy in that the onset was rather late and no other members in the family are affected. In addition it seems to be very rare for the biceps, triceps, and deltoid to be affected. The case was thought by some who had seen it to belong to the class of neuritic muscular atrophies, especially as there were sensory changes. But, as stated above, the best explanation for the latter is a functional one, at least in this particular case. Again, there had been no febrile illness shortly before the onset of the symptoms, as is the case in most of the neuritic atrophies.

5. The size of the testicles, with the patient's statement that they had been larger, points definitely to atrophy and negatives a persistence of the infantile condition. Their position in the scrotum was normal. There had been no operation for varicocele. He had not had mumps. There was no indication mentally that there was any loss of the internal secretion. He had not had syphilis or gonorrhœa. Although I do not know the relative importance of this condition, the atrophy must be taken as a fact in support of an organic disease as opposed to functional.

The case, even if it proceeds to a complete cure, as apparently it is doing, cannot be diagnosed as purely functional. It must remain isolated until many similar cases have been described and a definite symptomatology established. On the other hand, if definite groups of muscles remain atrophied it will have shown itself to be a true muscular dystrophy on which an interesting functional element had been superimposed.

Medical Societies.

OPHTHALMOLOGICAL SOCIETY.

Congenital Cataract.—Non-magnetic Steel Alloys.—Miliary Tuberculosis.

A MEETING of this society was held on June 14th, Mr. PRIESTLEY SMITH, the President, being in the chair.

Mr. E. NETTLESHIP and Mr. F. MENTEITH OGILVIE gave an account, with diagrams and drawings, of a family in which 20 persons in four generations had a peculiar variety of Partial Congenital Stationary Cataract in the form of a perfectly circular, well-defined, homogeneous or finely granular layer, of no great density, situated between the nucleus and posterior pole, about four millimetres in size. At first sight it might be taken for a small lamellar cataract but the invariable absence of any trace of a second layer and the certainty that the opacity lay behind the nucleus negatived that diagnosis whilst there was equally good evidence that it lay in front of the posterior pole. Some of the cases were first seen by Mr. R. W. Doyne at Oxford several years ago. These were re-examined by Mr. Ogilvie and were found to be unaltered and he had recently discovered a large number of new cases. The change caused but little loss of visual acuity and only a slight desire to shade the eyes against bright light; hence the number of cases could only be determined by ophthalmoscopic examination of every accessible member of the family. Mr. Ogilvie examined about 150 persons whilst one group living at Edinburgh was examined for the observers by Mr. G. Mackay. All the cases occurred in one branch of the family tree.

Mr. SIMEON SNELL (Sheffield) in a paper on "Steel Alloys which are not Magnetic" said that during recent years steel alloys had been used in certain industries and that these alloys had altogether different magnetic properties from ordinary iron or steel. Manganese steel which contained 12 per cent. of manganese, 87 per cent. of iron, and 1 per cent. of carbon, formed a very hard steel, which was difficult to machine. But the point of interest was that it was non-magnetic. Its toughness made it useful for many purposes. Nickel and iron was another alloy and this was as susceptible to magnetism as pure iron, but the admixture of a small percentage of manganese and carbon completely altered the magnetic properties. Thus a mixture of carbon 0·4 per cent., nickel 20 per cent., and manganese 0·9 per cent. with iron was absolutely non-magnetic. Another point was that if this same alloy was quenched in liquid air it became magnetic. Another alloy was chromium steel. It was magnetic but less so than ordinary steel. Specimens of these were exhibited and their magnetic peculiarities were demonstrated. Mr. Snell remarked that fortunately the vast bulk of all steel splinters penetrating an eyeball came from steel which was magnetic and therefore the use of the electro-magnet was unaffected. The possibility of steel being non-magnetic should be borne in mind and inquiries made as to the particular kind of steel from which the fragment injuring the eye became detached. In conclusion Mr. Snell referred to other alloys which were highly magnetic. He had not, however, yet found that they were more magnetic than the soft iron in use had been.

Mr. L. V. CARGILL and Mr. M. S. MAYOU described the case of a man, aged 21 years, who had miliary tuberculosis and tubercle of the choroid, with implication of one optic disc. He was admitted to King's College Hospital in December, 1905. Although previously healthy he had been feeling unwell for six weeks and was supposed to be suffering from

influenza. He perspired a good deal, was feverish, and was losing weight. There were no physical signs in the lungs and no tubercle bacilli were found in the expectoration, nor was blood. The opsonic index to tubercle was 1. Two weeks later an irregular yellowish-white patch was found in the right eye near the disc; it was only slightly elevated and there was no pigment. In the left eye there were signs of optic neuritis. The irregular pyrexia continued and signs developed in the lungs. On Feb. 17th tubercle bacilli were first found in the sputum and death occurred three days later. The post-mortem examination showed that the meninges were studded with tubercle; so also were the lungs and most of the abdominal viscera. The sections of the eye showed a typical tuberculous mass situated at the edge of the choroid on the outer side of the optic nerve; this mass involved the nerve and spread backwards through the lamina cribrosa. The anterior part of the globe was normal except for a congenital anterior synechia.

BRITISH GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on June 14th. Mr. F. B. Jessett, the President, being in the chair.—Dr. H. Macnaughton-Jones showed: 1. A Multilocular Dermoid Cyst of the Ovary removed from a patient, aged 47 years, who had suffered for 20 years, was feeble, and had attacks of tachycardia and syncope. On operation the tumour was found filling the abdomen; the upper third consisted of a pseudo mucinous cyst containing five pints of fluid. After evacuation the remainder of the tumour was removed entire. The tumour had a smooth surface and on section showed degenerating gland tissue with stumps of hairs surrounded by multinucleated giant cells. 2. A Pseudo-mucinous Cystic Adenoma of the Ovary, weighing 12 pounds, removed from a patient aged 42 years. Some 30 pints of ascitic fluid came away. The tumour was removed without rupture. Convalescence was satisfactory; the patient increased in weight. The following conclusions were drawn: (1) the necessity for early interference in ovarian cystoma, especially when ascites was present; (2) removal of the tumour without rupture when possible; (3) to avoid injuring the peritoneum as much as possible; (4) to use saline solution freely if the tumour was ruptured and to mop out the pelvis; (5) to examine the contents and wall microscopically for purposes of prognosis; and (6) to remove the second ovary in all doubtful cases and always after the menopause.—The President believed that ascites was associated in many cases with malignancy.—Dr. Macnaughton-Jones said that he had had cases where ovarian cystoma existed with ascites without evidence of malignancy.—Dr. R. P. Ranken Lyle read a paper on a Series of 50 Consecutive Abdominal Sections. These operations were performed between Oct. 1st, 1903, and Jan. 18th, 1906, and comprised the following list: Ovariotomy, 17; supravaginal hysterectomy, 8; salpingectomy, 5; salpingo-oöphorectomy, 4; enucleation of cyst, 4; cœliotomy, 4; myomectomy, 3; ventrofixation, 3; and panhysterectomy, 2. One death occurred out of this series. The technique was of the simplest description. Antisepsis was carefully carried out, the hands and forearms being washed in hot lysol solution, then turpentine and methylated spirit, and finally well washed in corrosive sublimate solution of 1 in 1000. The instruments were boiled and placed in 1 in 40 carbolic solution. The gauze sponges were boiled for 20 minutes and wrung out of hot saline solution. All buried ligatures and sutures were of catgut prepared by ether, methylated spirit, and corrosive sublimate solution. Silkworm-gut was used for all superficial sutures. The skin was prepared on the previous night by washing with soap and water, then sponged with turpentine and methylated spirit, a pad soaked in sublimate solution was applied, and washing with corrosive sublimate solution (1 in 1000) was carried out just previously to the operation. No vaginal antisepsis was practised. The abdominal incision was restricted to the smallest dimensions. All cut surfaces of peritoneum were properly adjusted. The abdominal wound was sewn up in three or four layers. A small strip of plain sterilised gauze wrung out of hot saline solution and covered with absorbent wool was used as dressing. The dressing was kept in position by strapping and flannel bandages. About three hours after operation the patient was given a drink of hot water with a little sodium bicarbonate in it. Early on the second morning calomel was given in two doses of five and three grains respectively at an interval of an hour followed in half an hour by a hot saline draught. The sutures were removed on the tenth day. Several of the more interesting cases were reported and the following conclusion was drawn. In order to obtain good results the following points ought to be observed: (1) a correct diagnosis; (2) simplicity in operative technique; (3) simplest antiseptic preparation combined with asepsis; (4) few instruments and appliances; (5) limited abdominal incision; (6) the correct adjustment of all cut peritoneal surfaces; (7) complete closure of the abdomen without drainage; and (8) the free use of normal saline solution when pus gets into the pelvis during an operation.—Dr. G. E. Herman said that the best results had been obtained in all cases but one and in that case the patient died from a disease which they could neither predict nor prevent. In an abscess cavity they should make provision for the exit of pus.—Dr. T. W. Eden approved of the emphasis laid on the importance of making a correct diagnosis before operation. He considered that there was a certain amount of risk in filling the abdominal cavity with saline fluid owing to possible conveyance of infection.—Dr. G. Elder considered the results to be unique and only possible after the work of Spencer Wells, Lawson Tait, and others.—Dr. R. L. Dickenson (New York) was impressed by the simplicity of the method. In America there was a danger of too many assistants. Catgut was mostly used. The use of gloves was practically universal and drainage was only used when pus was present in the cellular tissue.—Dr. Macnaughton-Jones, Mr. Charles Ryall, and the President also spoke.

MEDICO-LEGAL SOCIETY.—A meeting of this society was held on June 13th, Dr. W. Wynn Westcott (Vice-President) being in the chair.—Mr. John Troutbeck opened a discussion upon Methods of Ascertaining the Fact and Cause of Death. He described the statistical and legal value of accurate returns but avowedly dealt with the matter as a London coroner of 15 years' standing. He suggested that coroners should be guided in their office by rules of uniform procedure. Proceeding to discuss in detail the recommendations of the London County Council in 1895 as to the needed reform in coroners' law, he maintained that a private practitioner should not be expected to make State inquiries; the position of registrars should be revised so that a coroner might have two or three medical investigators who, after visiting the dead person, should report. Official pathologists should also be appointed. Contrary to an apparently common belief, the Medical Witnesses Act, 1836, did not create a vested interest for general medical practitioners. He indicated lines of possible reform in the present methods of identification and of disposal of the bodies of deceased persons; it might be wise to place burials under municipal control. There should be greater facilities at the public mortuaries for pathological and toxicological investigations. The general practitioner attending the deceased should be allowed to give clinical evidence at the inquest for the usual fee, but he should not perform the necropsy; coroners should be allowed to avail themselves before the inquest of expert medical opinion in any case presenting a special difficulty.—Sir William J. Collins, M.P., recalled that it was while he presided over the Public Control Committee of the London County Council that it had proposed the recommendations referred to; he had voiced two deputations to the then Lord Chancellor (Lord Halsbury) but on each occasion they had been met with a fatal *non possumus;* he agreed with most of the items with the exception of the suggested reduction in the number of the ancient inquest jury. The conditions under which post-mortem examinations in inquest cases were performed had greatly improved in London during the last decade; there was, however, still an anomalous division of jurisdiction which favoured chaos, between the registrars of death, the county council, and the borough councils. It was notorious that strenuous opposition was offered from certain quarters to all municipal undertakings; he fancied there would be a like prejudice against municipal undertakers. The practice of medico-legal necropsies had proceeded too long upon the false assumption that all qualified medical men were equally competent pathologists. Dr. May of Birmingham used to teach that it could not be expected that in certificates of death given voluntarily, and to which the public had access, the whole truth should be stated, and instanced deaths from puerperal fever and vaccination. All these questions must be viewed not merely from the coroner's or pathologist's standpoint but from that of the public. He trusted that before long a great school of medical jurisprudence would

be founded in London when the benefit of the proposed reform would be made very apparent.—Mr. S. F. Butcher (coroner for Bury), as President of the Coroners' Society, thought that many of the suggestions would be impossible in the practice of rural districts. He regretted that coroners were unable to make confidants of the local registrars of deaths.—Mr. Luke White, M.P. (coroner for East Yorks), believed that Parliament would not legislate upon these matters in a special sense to deal solely with large centres of population; it would be better for reformers to proceed upon more general lines, as that the body should in all cases be viewed by the medical man before signing the certificate of the cause of death. Neither the public nor medical men would tolerate a system of counter-signature by a medical investigator. The great expense and inconvenience of some of the proposals made them impracticable in such wide districts as his own.—Mr. Bernard Shaw, speaking as a layman, assured the society that the presence of the visiting medical investigator would be emphatically resented by the sorrowing relatives gathered in the house of the deceased. He noted an increasingly accentuated division among medical men: the highly qualified disinterested official class as contrasted with the general medical practitioner. The latter might overlook the commission of a crime by or against a patient as he did not anticipate such an event in his clinical practice. What was essential in order to awaken the general public to the danger which had been revealed by the present discussion was the publication of "A Handbook for Murderers," wherein all the possible abuses might be recorded—when once they were fully realised they would speedily be rectified; at present the public was in ignorance.—As there was a prospect of a considerable further discussion the meeting adjourned until July 3rd.

DERMATOLOGICAL SOCIETY OF LONDON.—A meeting of this society was held on June 13th, Mr. Malcolm Morris being in the chair.—Dr. H. G. Adamson showed a case of Hydroa Æstivale in a girl, aged 12½ years. The eruption had appeared during recent sunny weather and occupied the face, forearms, and hands with a sparser distribution on the legs. The patient had been entirely free from eruption during the winter but had had similar eruptions in hot weather before and these previous attacks had left numerous faint white glistening scars.—Dr. Adamson also showed a case of a Linear Nævus running down from the bend of the elbow to the head of the radius on the left side. The patient was a boy, aged 11 years, and the nævus was noticed for the first time when he was nine years old.—Dr. J. M. H. Macleod showed a case for diagnosis—a little girl, aged nine years, with a small patch of leucodermia on the right cheek. The eyelashes of the affected side were white, the hair being normally brown. The affection had begun at the age of four years and the disease was spreading in extent.—Dr. E. G. Graham Little showed a boy, aged 12 years, with a Grouped Vesicular Eruption upon his feet (on the dorsal surface), in his right groin, and on his left forearm. He had had eruptions of this kind for the past three years, almost always upon the feet, and in summer. There was very little itching. The blood had been examined for excess of eosinophiles but these had been found in the proportion of only 1·5 per cent. The marked herpetiform grouping had influenced Dr. Little to make a diagnosis of dermatitis herpetiformis—an opinion which was confirmed by the majority of those who saw the case.—Dr. J. J. Pringle showed a case under Dr. W. Essex Wynter's care of a Large Hairy Mole on the Hand with hypertrophy of the underlying bones.—Dr. H. Radcliffe Crocker and Mr. G. Pernet showed a case of a Hypertrophic Scar (left by a burn) which had improved during five years of treatment with thiosinamine injections.—Dr. J. H. Sequeira showed: 1. A case of Xerodermia Pigmentosa in a man, aged 26 years. It had commenced with freckles in early childhood. The patient had now a large epitheliomatous tumour of the size of a Tangerine orange in front of the left ear and numerous pigmented warts on the face, with some small tumours varying in size from that of a pin's head to that of a small marble. There were also several depressed scars in positions where there had been pigmented warts before. The hands were much freckled and there were many pigmented warts here also. The age of the patient was to be noted, it being a rare circumstance for subjects of this disease to survive for so long. 2. A man, aged 42 years, an Austrian by birth, the subject of anæsthetic leprosy. The man had travelled in many tropical countries and had come into frequent contact with lepers. He had had syphilis 20 years ago. The first symptoms of leprosy had appeared 18 months ago in the form of circular red patches on the forearm, then on the leg and toes. The musculo-spiral, ulnar, median, and the external popliteal nerves were thickened. The patient's opsonic index to tubercle had been tested and was found to be 0·8. It was accordingly proposed to treat him with small injections of tuberculin.—Dr. Arthur Whitfield showed: 1. A case of a very superficial Rodent Ulcer on the cheek of a woman in whom this had been noted for three years. The diagnosis had been confirmed by the histological examination of a portion of the skin affected and the very unusual superficiality of the growth was discernible on microscopical investigation, sections being shown to the meeting. 2. A case of persistent raised Erythematous Patches on the nose and cheeks of a child, aged five years. The blood coagulation was slow and calcium lactate had consequently been administered with complete success. 3. A microscopical specimen showing Leprosy Bacilli in a blood film from a case of very early leprosy in which the diagnosis had been made by scratching the surface of a doubtfully-pigmented patch and staining the blood so derived. By this simple means typical bacilli had been demonstrated. The patient had come from Columbia but had been resident two years in England. The first symptoms had appeared as burning sensations in the forearms and fingers six months ago.

KIDDERMINSTER MEDICAL SOCIETY.—A meeting of this society was held on June 15th, Dr. O. C. P. Evans, the President, being in the chair.—Mr. J. L. Stretton showed: 1. A case of Appendicostomy and read notes on another that he had recently operated upon; in the former case the patient was able to irrigate herself quite comfortably and efficiently, greatly to the relief of her late chronic colitis. 2. A baby on whom he had Repaired the Palate by a modified "Brophy" operation. 3. Three cases of Abscess in connexion with the Head, two as a result of mastoid trouble and the third from an injury to the forehead. Mr. Stretton read full notes of these three interesting cases. 4. Specimens which he had removed from various patients, including a large ovarian tumour, fibroid of the uterus, a dermoid, a large mass of glands of the neck, a huge carcinoma of the breast, and some gall-stones. Mr. Stretton also read an interesting letter from a relative in Alexandria describing a crèche which she had visited and the feeding of the infants directly from goats' teats which were placed on the bed and enveloped in towels.—Dr. Bertram Addenbrooke read notes on two rare lesions, Pseudo-hypertrophic Muscular Atrophy and Idiopathic Muscular Atrophy, the last-named being illustrated by the presence of the patient himself, the whole condition of the man being a very rare one. Dr. Addenbrooke also showed specimens which he had removed from various patients, including a tumour (fibro-adenoma?) from the dorsum of the tongue, a hæmatocele of the testis occurring after tapping a simple hydrocele of that organ, and a hydrocele of the cord.—Dr. W. A. Wilson-Smith read notes and exhibited the liver and spleen of a baby, aged 17 months, with symptoms which pointed to Lymphatic Leukæmia, the microscopic report of which, however, showed that the condition was due to congenital syphilis. He also read notes of a case of Pernicious Anæmia, a slide showing well-marked poikilocytosis.

EDINBURGH OBSTETRICAL SOCIETY.—A meeting of this society was held on June 13th, Sir J. Halliday Croom, Vice-President, being in the chair.—Professor J. A. C. Kynoch (Dundee) read a paper on Post-partum Ovariotomy. Reference was made to ovariotomy during pregnancy and four cases were described. The influence of the puerperium in causing suppuration, torsion of the pedicle, and gangrene of ovarian cysts was noted and illustrative cases of these conditions were recorded. In two cases immediate operation was required but in a third case the operation was deferred for four weeks after the labour as no inflammatory signs were present.—Dr. A. H. F. Barbour and Sir Halliday Croom made remarks on the paper.—Sir Halliday Croom submitted to the society a question upon which his opinion had been asked. It was with regard to a case of Heteroplastic Ovarian Grafting, in which portions of healthy ovarian tissue had been removed from one woman and grafted into the broad ligaments of another woman whose

ovaries had been removed on account of disease. This woman subsequently menstruated regularly and ultimately bore a healthy living child. The problem was, Which woman was the real mother of the child? The general opinion of the society seemed to be that provided it was certain that the ovaries were entirely removed and no trace of ovarian tissue left behind, the woman from whom the grafts were taken must be regarded as the real mother.—Dr. Barbour, Dr. G. Keppie Paterson, Dr. E. W. Scott Carmichael, Dr. M. Campbell, Dr. T. B. Darling, Dr. M. Dewar, D. S MacVie, Dr. H. M. Church, Dr. A. McDonald, Dr. A. Grant McDonald, Dr. W. Macrae Taylor, and Dr. G. F. B. Simpson joined in the discussion.—Sir Halliday Croom read a paper on Malignant Endocarditis in Pregnancy. After pointing out the frequency of this disease in puerperal septicæmia, and in contrast the extreme rarity of it as a complication of pregnancy, he read the details of a case which had occurred at the Royal Maternity Hospital. The patient was admitted suffering from albuminuria and dropsy. She was five weeks from term. 24 hours after admission the temperature rose and remained high and irregular. There were extreme œdema and dyspnœa. After a few days labour came on and the patient was delivered of a stillborn child. She seemed easier after delivery but suddenly collapsed and died. The post-mortem examination showed acute septic endocarditis of the aortic and mitral valves, with acute myocarditis and adhesive pericarditis. Macroscopic and microscopic examination showed that the uterus and annexa were perfectly healthy. The infection was staphylococcal but the source was not apparent. The course of the disease was probably shortened by the anæmia of pregnancy, by the co-existing nephritis, and by the strain upon the heart caused by the labour. A *résumé* of the other recorded cases concluded the paper.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on June 19th, Mr. W. Handcock, the President, being in the chair.—Dr. F. W. Eurich gave a microscopical demonstration and showed three cases of Tabes Dorsalis.—Dr. T. Jason Wood showed two specimens of Carcinoma of the Rectum and a specimen of Carcinoma of the Uterus.—Dr. A. W. Faulkner showed a case of Paramyoclonus Multiplex.—Dr. Eurich read short notes on recent work on Immunity. After briefly reviewing the previous history of immunity he went on to describe the discovery of opsonins and gave a very interesting demonstration of how the opsonic index was obtained and its practical uses.—Dr. T. W. Hime afterwards made some remarks on the subject and Dr. Eurich replied.—Dr. A. Little read notes of two cases of Escape of Orbital Fat under the Skin of the Upper Eyelids. They were both treated most successfully by operation.

Reviews and Notices of Books.

The Thompson-Yates and Johnston Laboratories' Report. Edited by RUBERT BOYCE and CHARLES S. SHERRINGTON, with H. E. ANNETT, BENJAMIN MOORE, RONALD ROSS, and E. W. HOPE. With illustrations and plates. Vol. VI. (New Series). Part II., December, 1905. Published for the University Press of Liverpool by Williams and Norgate. Pp. 141.

THIS issue contains the following contributions: (1) Trypanosomes, Trypanosomiasis, and "Sleeping Sickness," by H. Wolferstan Thomas, M.D. McGill, and a description of the Tissue Changes by Anton Breinl, M.U.Dr. (Prag.); (2) Gland Puncture in Trypanosomiasis, by the late J. Everett Dutton, M.B., and John L. Todd, M.D. McGill; (3) the Nature of Human Tick Fever in the Eastern Part of the Congo Free State, by the late J. Everett Dutton, M.B., and John L. Todd, M.D.; (4) on the External Anatomy of Ornithodoros Moubata (Murray), by Robert Newstead, A.L.S., F.E.S.; and (5) on the Habits of the Marine Mosquito (Acartomyia Zammitii, Theobald), by Surgeon E. H. Ross, R.N., of H.M.S. *Lancaster*, Mediterranean Fleet. The first paper is in two parts. Part I. is divided into seven sections: (1) a description of cases of sleeping sickness in man; (2) trypanosoma Gambiense inoculated in different animals; (3) trypanosoma dimorphon; (4) dourine, mal de caderas, surra; (5) bacteriological examination of blood—gland puncture, and so on; (6) cultivation experiments; and (7) treatment. Part II. deals with: (1) pathological anatomy, macro- and micro-scopical changes in the tissues in man in four cases; (2) macro- and micro-scopical changes in the tissues of animals infected with trypanosoma Gambiense; (3) macro- and micro-scopical changes in the tissues of animals infected with trypanosoma dimorphon; (4) macro- and micro-scopical changes in the tissues of animals infected with trypanosoma Brucei, trypanosoma Evansi, and trypanosoma equiperdum; (5) summary of anatomical changes; (6) bibliography; (7) a synopsis of Mr. H. G. Plimmer's report; and (8) the plates. The conclusions drawn from the second section of Part I. are that: 1. The further comparison of the trypanosomes found in (*a*) the cerebro-spinal fluid of the cases of Uganda sleeping sickness; (*b*) the cerebro-spinal fluid and blood of the cases of Congo Free State sleeping sickness; (*c*) the blood of the cases of Congo Free State trypanosome fever; and (*d*) the blood of Europeans infected in the Congo confirms the previous observations that all these trypanosomes are identical in animal reactions and morphology with trypanosoma Gambiense. 2. There is no acquired immunity against infection nor transmission of immunity to offspring. 3. That baboons, cynocephalus babuin and cynocephalus sphinx, are susceptible to infection with trypanosoma Gambiense. That usually a chronic type of the infection develops but a fatal termination occurs. 4. That in many of the animals, especially the horse, the cow, the donkey, the sheep, and the goat, the infection is of a mild character, but their blood is still infective to susceptible animals one year after the infection. 5. That periodicity of the parasite is a prominent feature both in man and in beast. 6. That the passing of a strain from a susceptible into a very resistant animal does not attenuate the organism. 7. That the parasites in an animal may sometimes become more virulent. The numbers increasing enormously, the subinoculated animals become more rapidly infected and death occurs. That such a strain may be particularly virulent for one species of animal. That the more rapid infection is not due to the inoculation of a greater number of parasites than usual. 8. That the parasites, after being passed through many hundreds of animals for nearly three years, still retain their morphological characters and animals inoculated with them react as described by Dutton and Todd.

From the experimental work with various therapeutic agents Dr. H. W. Thomas says that the following conclusions can be made: 1. That animals suffering from trypanosome infection react favourably to only a few agents, of which arsenic is the only drug which seems to exert a more than transient action. 2. That the greater the amount of arsenic introduced into the system of the animal the greater and more permanent is the effect on the parasite. 3. That arsenic medication is indicated in the treatment of individuals suffering from trypanosomiasis. That the treatment ought to be long continued and regularly administered in as high doses as the case can stand. That all aids to building up the system should be employed. 4. That in trypanred we possess an agent of some use in the treatment of trypanosomiasis. That certain trypanosomic diseases appear to be more amenable to its action than others. That in the substance at present available there is need for improvement in order to abolish its toxic effects. 5. That a combination of arsenic and of an improved form of trypanred would seem indicated in the further investigation of the cure of trypanosomiasis. 6. That further efforts ought to be made to produce less toxic forms of arsenic suitable for injection. 7. That the action of

both arsenic and trypanred causes a hyper-leucocytosis and that this condition has an effect upon the parasites. In confirmation of this may be recorded: (*a*) the hyper-leucocytosis coincides with the time when the parasites suddenly disappear from the peripheral circulation; (*b*) there is a smaller number of parasites present in necrotic, bacterially-infected areas than in the general circulation; and (*c*) the effect of certain bacteria on animals infected with trypanosomes.

With regard to the pathological histological changes, the changes described are the small-celled infiltrations around the vessels of the brain and spinal cord, especially remarkable through the presence of plasma cells. Undoubtedly a large number of sufferers from sleeping sickness do not die from the original infection but rather from some secondary infection, such as pneumonia, septic meningitis, and so on, caused either through septic processes starting in the oral or nasal cavities or due to the generally debilitated condition, a result of the trypanosome infection. In all three cases of sleeping sickness and in the case of trypanosomiasis, and in many of the experimental animals infected with trypanosoma Gambiense and trypanosoma dimorphon, hæmorrhagic lymph glands have been found. Animals infected with various strains of trypanosomes derived from cases of sleeping sickness and trypanosome fever show similar changes in their nervous system and organs to those described in cases of sleeping sickness and these changes depend largely on the duration of the disease. From the facts adduced the author concludes that the lesions in the brain, spinal cord, and organs can be produced by the trypanosomes and it appears that only in the chronic infected animals do the lesions occur.

The authors of the paper on Gland Puncture in Trypanosomiasis conclude that (1) the examination of glandular fluid, though not infallible, is a very efficient means of detecting the presence of the disease; and (2) because of its simplicity gland puncture will be found a very useful routine diagnostic method. From the facts presented in the paper on the Nature of Human Tick Fever the authors conclude that: (1) tick fever is clinically identical with relapsing fever and has for its pathogenic agent a spirochæte; (2) the spirochæte is probably the spirochæte Obermeieri; (3) the tick, Ornithodoros moubata, can transmit the spirochæte from animal to animal; (4) the transmission is not merely mechanical but some developmental process is carried on in the tick; and (5) a considerable degree of immunity or tolerance to the spirochæte can probably be acquired. Surgeon Ross thinks that there is no doubt that Malta fever is conveyed by either acartomyia or by a biting fly (Stomoxys calcitrans) which is very prevalent in Malta. The plates accompanying the second and fourth contributions are beautifully executed.

Clinical Bacteriology and Hæmatology for Practitioners. By W. D'ESTE EMERY, M.D., B.Sc. Lond., Clinical Pathologist to King's College Hospital, and Pathologist to the Children's Hospital Paddington Green, &c. Being the second edition of "A Handbook of Bacteriological Diagnosis for Practitioners." London: H. K. Lewis. 1906. Pp. 240. Price 7*s.* 6*d.* net.

IN the review of the first edition of this work we characterised it as being "eminently practical, concise, and accurate," and we are glad to welcome this enlarged and improved edition. The title has been changed but the book has not been much altered except by certain important additions. Its distinctive claim is to be a handbook for practitioners and perhaps its greatest value will be found in directing clinical investigations along correct and useful channels and in preventing material for bacteriological examination being wrongly selected and collected in an unsuitable manner. The most important change in this edition consists in the addition of an entirely new section on hæmatology which deals with the subject in the practical manner which is adopted in the bacteriological portion. The author in his preface gives the very necessary warning that a blood count does not give the diagnosis directly without requiring any mental exertion on the part of the physician or the surgeon. The bacteriological section remains practically unaltered but some useful additions have been made concerning the examination of material from special parts of the body—mouth, conjunctiva, and so on. The method of estimating the opsonic index of the blood is given and also the method of making and using Wright's blood pipettes. A correction has been introduced in the description of anthrax spore staining but the wrong reference to the figure of the tetanus bacillus (p. 46) is still unaltered. The author describes a macroscopic method of carrying out Widal's reaction, used and apparently devised by himself, which seems to be a useful modification where much routine work has to be done and which should also prove of value to the practitioner if he could procure the necessary materials ready prepared.

In the section on the collection of blood for cultural methods of examination it is difficult to understand why the method of James and Tuttle is selected as the best. A syringe presents many obvious advantages over the instrument used by these observers, especially when, as so often occurs, it is desirable to prevent coagulation of the blood by mixing it with citrate solution. The directions "to insert the needle very obliquely with the point directed away from the body" are also difficult to comprehend and we should advise the removal of the compressing bandage *before* the withdrawal of the needle if it is desired to prevent subcutaneous hæmorrhage. A short section on cyto-diagnosis, illustrated by some good plates, will also prove very useful. The book is well printed and its value is enhanced by a number of new plates with good reproductions from photographs as well as from coloured drawings of various blood cells. The book can be strongly recommended to all practitioners who are anxious to keep themselves abreast of modern means of diagnosis by laboratory methods.

The Management of Children. By HOWARD BARRETT. London: George Routledge and Sons, Limited. 1906. Pp. 653. Price 5*s.*

IN his preface to this work on the management of children the author states that he published in the year 1873 a book on the same subject and called nearly by the same title. We regret that we are not familiar with this work, for we consider that the volume under review is one of the most practical and instructive works on the management of children with which we are acquainted and we would gladly compare the author's present and matured views with those which he expressed some 30 years ago. It is evidently written by a man who is thoroughly conversant with the practical as opposed to the theoretical points involved in the management of children. The author addresses his remarks to mothers and nurses but none the less we thoroughly recommend the book to the notice of members of the medical profession, for it contains a large number of practical hints which may be found of real value to those who supervise the health of children. Although a considerable portion of the book is occupied with a description of medical, and to some extent of surgical, diseases to which children are subject, nevertheless the most important, and in our opinion the best, sections are those which are concerned with the personal hygiene of children and the management of the nursery. The chapter on exercise and sleep is perhaps the best of many which are distinctly good. Chapter III., which is concerned with the clothing and washing of the baby, contains also many practical suggestions. The author is clearly a strong advocate of the hardening principle for children, although in his recommendations for protecting the newly-born infant

from every possible source of chill it is clear that he fully appreciates the extreme delicacy of the immature heat-regulating centres and the necessity for protecting it from undue shock. He lays the very greatest stress upon the importance of Boerhaave's well-known aphorism of keeping the head cool and the feet warm. From personal experience he remarks on the manner in which infants and little children are clad in successive layers of garments of complicated make and adjustment. "I am satisfied," he states, "that a salutary nursery reform should be undertaken in the number, shape, and material employed could anyone of influence in these matters be found bold enough to take the initiative."

A feature of great merit in Mr. Barrett's work is that he gives a scientific or rational explanation of the action of remedies and of the various vital phenomena which are incidentally referred to. The fact that the majority of these explanations are so strikingly accurate and show such a wide knowledge of the general principles of biology as well as of physiology causes us the more surprise at a statement which appears on p. 113 and which is made in reference to the advantages of exercise for children. The author states that one of the principal physiological effects of exercise is that a more active combustion of carbon goes on in the system and especially in the lungs and liver and that a considerable increase in the animal "heat" (temperature?) would take place in consequence were it not at the same time given off more rapidly than usual from the surface of the body. In the first place, it is very questionable whether any considerable oxidation of carbon occurs in the lungs either during exercise or during rest. In the second place, there can be no question that one of the great advantages of exercise is that carbon is oxidised and converted into kinetic energy and not exclusively into heat as during rest; and finally, it may be mentioned that during exercise the liver is almost certainly relieved of some of its duties in the way of oxidising carbon and not that a more active combustion of carbon occurs in this organ during exercise. Exercise is, in fact, a most efficient servant to the over-worked liver. In this one sentence which we have quoted above we find a larger number of mis-statements than we have noticed in all the rest of the book put together. In saying that "The Management of Children" may be recommended to the lay reader we are strongly influenced by the fact that the author almost exclusively depends on hygienic and prophylactic measures and attaches very little importance to the use of drugs.

Infection, Immunity, and Serum Therapy in Relation to the Infectious Diseases which attack Man; with Considerations of the Allied Subjects of Agglutination, Precipitation, Hæmolysis, &c. By H. T. RICKETTS, M.D., Instructor in Pathology, University of Chicago. Chicago: American Medical Association Press. 1906. Pp. 600.

THE immense volume of literature which has appeared in recent years on the subject of immunity and the technical language in which much of the work is set forth render it absolutely impossible for anyone not a specialist in pathology to acquire for himself without assistance a knowledge of the present state of scientific opinion on this matter. Recently some attempts have been made to provide intelligible summaries of this branch of pathology, which has so important a bearing on practical therapeutics. Dr. Ricketts's book, which grew out of a series of articles contributed to the *Journal of the American Medical Association* during the year 1905, has this object in view. It deals in a very thorough manner with infective agents and their modes of action, with the resistance of the body to their attack, and with the theories which have been propounded to account for the phenomena observed. The first four chapters are concerned with general considerations on infection and with the development of knowledge on the subject. Then follow two chapters on natural and acquired immunity and two on toxins and antitoxins. The phenomena of agglutination occupy two more and one is devoted to a consideration of precipitins and their importance in forensic medicine and in commerce. A discussion on the nature of bactericidal serums, on cytotoxins, and on phagocytosis, including a survey of Ehrlich's views, occupies Chapters XII. to XV. In Chapter XVI. the principles of serum treatment are discussed. The second half of the book is devoted to a consideration of the various infective diseases. This part is not divided into chapters but the diseases are grouped according as they are produced by soluble toxins or by organisms producing intracellular toxins and are followed, or not followed, by a period of immunity. The concluding sections deal with diseases due to protozoa and with those produced by unknown agents. Under the heading of each disease are considered the nature of the causal agent, the toxins produced, the modes of infection and means of prophylaxis, and the nature of the resistance offered by the tissues of the host. The book is very complete and thorough. Indeed, its very thoroughness renders it perhaps less suitable for those readers who are not already partially acquainted with the subject of immunity, since the complexity of the conceptions introduced is necessarily confusing. Beginners would probably prefer to assimilate the rudiments of the subject before being introduced to agglutinogens, opsonoids, and anti-amboceptors. On the other hand, the absence of references to the original authorities quoted somewhat detracts from the merits of the book from the point of view of the more advanced student. The aim throughout is theoretical rather than practical, little or no guidance being offered as to the therapeutic employment of the agents described.

As in too many American books, misprints abound. Here and there in view of the American spelling it is difficult to know whether we are in the presence of a printer's error or of a new corruption of our mother tongue—e.g., febril, epitheloid. The classical languages fare particularly badly—e.g., inficire, ἀλέγειν, B. botulismus, tetanus dolorosa. We wonder what view American chemists take of the spelling "morphin," "strychnin," since the correct termination in *-ine* was intended to distinguish the alkaloids from other bodies, such as the glucosides or proteids. However, in spite of such defects as we have noted, the book is a useful summary of the branch of science with which it deals, and the author is to be congratulated on the care and diligence shown in making so complete a compilation of recent literature.

On Entoptic Vision. By W. F. BARRETT, F.R.S. The Scientific Proceedings of the Royal Dublin Society. London: Williams and Norgate. Part I., pp. 19. Price 6*d*. Parts II. and III., pp. 27. Price 1*s*.

Professor Barrett when looking through a pinhole in a card held close to his eye found the disc of light on his retina obscured by a dark shadow of definite shape. Upon consulting an ophthalmic surgeon the diagnosis of incipient cataract was made. These papers are the result of a careful examination of his own eye and led him to devise a special instrument (the entoptiscope) for the more convenient drawing and measurement of what is observed.[1] This instrument appears to be easy to use even by an unskilled observer. When the pinhole of the instrument is placed at the anterior focus of the eye clearly the incident cone of light becomes a cylindrical beam after traversing the crystalline lens. Hence any opacity in the vitreous throws a shadow of precisely the same size on the retina, as was pointed out by Donders. When a drawing is made of this shadow by the entoptiscope its real size will be one-tenth of that of the drawing. The position of the opacity—i.e., its distance from the retina—

[1] THE LANCET, April 21st, 1906, p. 1123.

can be easily calculated by using Donders's method with two pinholes of which a clear account is given. In the formulæ on pp. 60 and 75 a greater accuracy would be obtained by making P represent the distance of the retina from the second principal plane of the eye instead of the pupillary plane—i.e., in an emmetropic eye 20·7 millimetres instead of 19 millimetres. For each dioptre of hypermetropia there should be subtracted about one-third of a millimetre from this value of P and for each dioptre of myopia there should be added about one-third of a millimetre to P. We are glad to notice a reference to Mr. J. W. Gordon's ingenious method of overcoming the difficulty of microscopists when using very high powers. As is well known, when a very strong objective is used its image becomes practically a luminous point and hence a homocentric pencil of light enters the eye. Consequently the shadows of any dust in the microscope or of any obscurities within the eye are thrown on the retina with the image. Therefore delicate microscopic details become indistinct, as the very conditions which create high-power microscopy also create the conditions of entoptic vision. "The difficulty appeared to be insurmountable until Mr. J. W. Gordon entirely overcame it by receiving the luminous point of the image of the objective carrying with it the image of the microscopic object on a little ground-glass screen which is kept in rapid eccentric motion by a small electric motor. Under these circumstances eye-observation or micro-photographs of objects magnified 7000 diameters exhibit a wonderful clearness and sharpness of definition." It is possible that with the help of Professor Barrett's instrument it could be determined whether an opacity at the posterior pole of the lens were situated on the outer or the inner side of the capsule, which would be of the greatest value to the patient, as trustworthy information as to the probable progress of the cataract could then be given.

LIBRARY TABLE.

Indigestion: An Elementary Study of its Causes and Treatment. By G. FERNANDEZ CLARKE, M.R.C.S. Eng., L.R.C.P. Lond. London: John Bale, Sons, and Danielsson, Limited. 1906. Pp. 85. Price 2*s.* net.—The object of the author in this book is to point out that although the immediate causes of indigestion are, in the majority of cases, apparently due to some abnormal state of the stomach, it is to parts more remote that the physician's attention is principally directed when the treatment of digestive failure is considered. Mr. Clarke divides his booklet into five chapters and writes successively of Digestion, Indigestion, Anæmia, Constipation, and the Treatment of Indigestion. This is a helpful little book, it is well and clearly written and will be of service to the student and to the young practitioner. In the class of cases where anæmia is a prominent symptom and the administration of iron gives rise to distressing symptoms the author recommends the alginate of iron, which is practically unaltered by the action of the gastric juice and leaves the stomach, to enter the small intestine, without giving rise to gastric discomfort. The preparation has also a slightly laxative action on the intestines.

Notes on Military Sanitation. By Lieutenant-Colonel H. P. G. ELKINGTON, R.A.M.C., Sanitary Officer, Aldershot Army Corps. London: The St. John Ambulance Association. 1906. Pp. 104. Price 1*s.* net.—This handy little manual is a new one in the series issued by the St. John Ambulance Association. Most of the standard works on hygiene have been consulted by the author when putting his notes together in the present form. The notes were collected from time to time for the purpose of lectures on military sanitation and the prevention of disease to officers, non-commissioned officers, and men of the regular forces, and it is hoped that they may be found useful for the instruction of the auxiliary forces and the St. John Ambulance Brigade. The author lays no claim to originality. He has presented the manual to the Order of St. John of Jerusalem in England, to be used in connexion with the lectures to be given to the members of the brigade, more particularly to those forming its bearer companies, in accordance with the suggestion of the present Director-General of the Army Medical Service. The little book is sufficiently illustrated; it must prove of real service to those who desire a knowledge of this most useful and essential subject.

From Farm to Forum, or Young Africa. By ARNOLD H. WATKINS. Cape Town: J. C. Juta and Co. 1906. Pp. 350. Price 3*s.*—Dr. Watkins is an Edinburgh graduate and he has now given to us a story evidently reminiscent of his old student days and of his early years as a practitioner in South Africa. Our profession has not produced many novelists of late years but Dr. Watkins knows how to write a book of fiction and this work places him permanently in the ranks of the novelists. His hero is the son of a Dutch farmer who studies medicine and develops into a politician. There is a great deal of humour in the book and the story of Tant' Hannah's pilferings and pocketings, as related by the storekeeper, is uncommonly well told. The death scene of John Baxter is one marked by strong pathos. The book, which is a novel with a mission, will no doubt be read chiefly in South Africa but we can recommend it to the notice of our professional brethren at home, not only as the work of an Edinburgh graduate but also as a book which will afford amusement and an insight into much that goes on amongst the Boers in South Africa.

Reports and Analytical Records
FROM
THE LANCET LABORATORY.

(1) GRANULAR EFFERVESCENT LAXATIVE LITHIA; (2) EFFERVESCENT LITHIUM CITRATE TABLETS; AND (3) VAGINAL SUPPOSITORIES (STERILISED).

(PARKE, DAVIS, AND CO., 11, QUEEN VICTORIA-STREET, LONDON, E.C.)

(1) THE granular effervescent lithia salt affords a convenient and acceptable way of administering lithia. The preparation effervesces briskly on the addition of water and the draught is not unpleasant. Each teaspoonful contains five grains of lithium citrate and 30 grains each of potassium citrate and sodium phosphate. The last two salts, of course, render the preparation laxative. An important feature of the preparation is that it leaves no undissolved salt in the glass, the ingredients being readily soluble and evidently of excellent quality. (2) The lithium citrate tablets contain also saline ingredients which interact with the production of carbonic acid gas when placed in water. They are very convenient for the exact administration of the lithium salt. (3) Two sets of vaginal suppositories have been submitted to us, one containing as an antiseptic iodoform and the other boric acid and aristol, an iodine compound which may be regarded as an iodoform substitute but free from iodous odour. The suppositories are packed in sterilised tubes and the utmost care is taken, it is stated, to insure the absolute bacteriological cleanliness of the preparations. The suppositories are intended for post-partum use, preserving an aseptic condition of the canal. They are regarded as superior to the use of vaginal douches, inasmuch as they are calculated to maintain a local effect.

OZALA WATER (DINSDALE).

(THE NORTHERN COUNTIES SPA WATER CO., LIMITED, DINSDALE.)

Dinsdale is situated on the banks of the Tees near Darlington and, locally, at any rate, has long been known to

possess a sulphur spring which, however, has never come into public prominence. Quite recently an estate has been developed with a view of making the sulphur waters better known and of establishing a spa on well-organised lines. The water, according to our analysis, certainly possesses medicinal properties, for, as will be seen from the results, it contains in addition to sulphuretted hydrogen gas magnesium sulphate and sodium sulphate in solution. In a sample taken from a bottle of the water we found that the sulphuretted hydrogen amounted to 5·44 cubic inches per gallon. There is also some sodium sulphide present. The water has, of course, the peculiar smell of sulphuretted hydrogen. Our analysis, reported in grains per gallon, gave the following results: sodium sulphate, 97·30; magnesium sulphate, 46·90; calcium sulphate, 105·67; and calcium carbonate, 20·30. The water thus contains approximately 300 grains per gallon of mineral salts, amongst which are included the purgative sulphates of sodium and magnesium. The saline composition of the water compares favourably with that of other waters of this class. As regards the amount of sulphuretted hydrogen we have little doubt that more would be found in the water when taken fresh from the spring, since this gas has a tendency to disappear in bottle. It is but reasonable to conclude that the water possesses the same therapeutic properties which distinguish sulphur waters found elsewhere, whilst it contains a sufficiency of the sulphates of sodium and magnesium to render it mildly aperient.

INVALID PORT.

(HATCH, MANSFIELD, AND CO., 15, COCKSPUR-STREET, TRAFALGAR-SQUARE, LONDON, W.C.)

This wine belongs to the class of port known as tawny and has evidently been matured in wood for some time. It is peculiarly soft to the palate, though dry and practically non-acid. Its colour is a light red, as compared with the dark almost purple colour of port matured in bottle. On analysis the following results were obtained: alcohol, by weight 19·42 per cent., by volume 23·78 per cent, equal to proof spirit 41·68 per cent.; extractives, 9·62 per cent.; mineral matter, 0·27 per cent.; sugar, 8·38 per cent.; volatile acidity, reckoned as acetic acid, 0·048 per cent.; fixed acidity, reckoned as tartaric acid, 0·337 per cent. The analysis is satisfactory and shows among other things a negligible degree of acidity and a minimum amount (for port wine) of sugar. The flavour is acceptable, being delicately fruity. The wine has been carefully selected for invalid purposes and the choice may be approved.

BAR-LA WATER.

(THE BAR-LA WATER CO., SWINTON, NEAR ROTHERHAM.)

Barley water is often recommended as a suitable drink in hot weather and on the whole it may be regarded as perfectly wholesome, although it is difficult to assign to it any marked nutritive value. It is a cooling and refreshing drink and perhaps has the advantage over ordinary water in containing a little solid matter in solution which is soothing to the gastric mucous membrane. Bar-la water is practically barley water aerated with carbonic acid gas. It affords a refreshing beverage. The presence of a small quantity of starch was revealed by iodine. It contains, however, in addition some citrate of caffeine and urotropine, both of which are, of course, drugs, and to the indiscriminate use of which we strongly object. Under the advice of the physician the water may have obvious advantages but without that advice it may be distinctly mischievous.

ARMY MEAT AND VEGETABLE RATIONS.

(MACONOCHIE BROS., LIMITED, MACONOCHIE'S WHARF, MILLWALL, LONDON, E.)

We have examined these rations and the contents appeared to be wholesome and as regards taste to be as satisfactory as fresh meat. On searching carefully for evidence of metallic contamination we found none whatever. This is a tribute to the method of tinning adopted, especially as in one instance the ration examined had been in its tin for over five years. The fact is that this firm have for some time adopted a tin which is made and hermetically closed without the use of soldering or lead. The edges overlap and are pressed together, forming a perfectly air-tight joint. Moreover, the lid of the tin is protected from coming into contact with the contents by interposing a specially prepared parchment. The method of sealing the lid on the tin without the use of solder is distinctly ingenious and will be approved on hygienic grounds.

AEDUN BREAD.

(AEDUN PATENT FLOUR CO., 103 AND 105, HIGH-STREET, RAMSGATE, KENT.)

According to analysis the choice of materials adopted in the preparation of this bread produces a nourishing loaf. The coarse bran has evidently been removed and the bread shows a uniform texture. Analysis indicated the presence of 6·87 per cent. of proteid in the moist bread, which is equal to 12·20 per cent. in the dried material. Compared with ordinary bread, it contains a distinctly higher proportion of mineral matters and of fat. The increased solubility and, to some extent digestibility of this bread indicate the addition of a special food substance to the wheaten flour. The only drawback to the loaf which we examined was that it does not keep moist and soft. On the contrary, it rapidly dries and hardens on its surface, becoming like stale bread.

GLENDORR SCOTCH WHISKY.

(A. DESCHOIX AND CO., 8, NEW COVENTRY-STREET, LONDON, W.)

This whisky is guaranteed "genuine pot-still pure Highland malt, 12 years old." This guarantee may be trusted according to the results of our analysis and the evidence of the palate. The proportion of secondary products certainly indicates a pot-still spirit and the mellowness of its flavour points also to the spirit having been well matured. The total secondary products amounted to 411 grammes per hectolitre of absolute alcohol present and the ethers amounted to no less than 150 grammes, an amount which exceeds that found in medium old brandies. Further results of analysis showed alcohol by weight 41·80 per cent., by volume 49·29 per cent., equal to proof spirit 86·37 per cent.; extractives, 0·03 per cent.; mineral matter, *nil*; and volatile acidity reckoned as acetic acid, 0·024. In view of these results we can well believe that the description of this whisky is genuine.

HOME MADE SOAP.

(C. F. HAYNES, 2, CAMDEN-TERRACE, HIGH-ROAD, EAST FINCHLEY, N.)

This soap presents those qualities which are particularly desirable in a soap intended for purely toilet purposes. It imparts a peculiarly smooth feeling to the skin whilst its cleansing action is prompt. The ingredients chosen are evidently of good quality and are used, moreover, in well-balanced proportion. It may be presumed that the fact of this soap being called "home-made" implies particular attention to the details in its manufacture and to the selection of the fats and alkali used in its preparation.

APPLE TEA.

(S. W. THOMPSON AND CO., CHESTERFIELD HOUSE, 98, GREAT TOWER-STREET, LONDON, E.C.)

This preparation appears to us to be simply desiccated apple. It is suggested as a non-poisonous substitute for tea, coffee, and cocoa. It may certainly be said with truth that it is free from purins or uric-acid-forming substances, inasmuch as we found that it contains practically no nitrogenous substances at all. The infusion resembles in colour an infusion of tea, while it has an acid "appley" flavour. The results of analysis are analogous to those yielded on analysing the apple. The soluble matters amounted to 70 per cent., the mineral matter to 2·60 per cent., the malic acid to 2·68 per cent., and the moisture to 9·50 per cent. The view is that apple tea possesses much

the same diuretic properties as does cider and that it may thus prove to be a useful beverage for the gouty and for those who have a tendency to uric acid deposits. This preparation makes little appeal to us.

New Inventions.

A NEW INTRATYMPANIC SYRINGE.

CONSIDERING the frequency with which obstinate middle-ear discharge is associated with disease of the tympanic attic and the difficulty there is in cleansing the attic either by the dry method or by the ordinary ear syringe, it is not surprising that many special intratympanic syringes have been constructed. Intratympanic syringes are used both in diagnosis and in treatment. When a large part of the membrana tensa is gone and when easy access is thus given to the upper part of the tympanic cavity the turned up point of an intratympanic syringe may be inserted into the

attic or backwards into the aditus and in this way large quantities of flakey or cheesy discharge may be removed. Evidence of this kind, along with the information obtained by probing, goes a long way in guiding the surgeon in the conduct of the case, and if a continuance of such cleansing does not result in entire cessation of discharge the indications for operation (ossiculectomy or the radical operation) are often clearly defined. Such a syringe must present the following features:—(1) Its point must be narrow and so turned upwards that it can enter behind the membrane into the tympanic attic; (2) its point must be capable of rotation through the upper half of a circle, for it may have to be introduced behind the malleus handle under the posterior fold of the membrane, or in front of the handle under the anterior fold of the membrane; and (3) as the current from the syringe must be directed with precision the instrument must be small and easily handled. The lumen of the delivery tube must be free from obstruction as the solution must be applied in considerable volume and with considerable force, the secretion to be dislodged being often tough and present in large quantity. Nearly all existing intratympanic syringes fail in one or more of the above requirements. In nearly all the point is too narrow and the current too weak—results often produced or made worse by the fitting of a narrow rotation nozzle to the syringe. Often the bag containing the solution is too small. I have designed the syringe shown in the illustration. It fulfils all the above requirements and both for diagnosis and treatment has proved satisfactory. Like all such instruments, the syringe must be used by the surgeon himself and only with the aid of the mirror and speculum.

The instrument may be obtained from Messrs. Baird Bros. of Glasgow or from Messrs. Down Bros., Limited, St. Thomas's-street, London, S.E.

JAMES KERR LOVE, M.D. Glasg.,
Glasgow. Aural Surgeon, Glasgow Royal Infirmary.

Looking Back.

FROM

THE LANCET, *SATURDAY*, June 28th, 1828.

In the British dominions, we have corporations of physicians, surgeons, and apothecaries, in each of the countries which are now happily united to the first and most powerful nation in the world. Each of these corporations in England, Scotland, and Ireland have peculiar rights and privileges, though a knowledge of each profession is often acquired from a similar source, often from the same teachers and authors, and the practice of each is precisely similar; and yet, a practitioner authorised by any one corporation, cannot practise within the precincts of the other with impunity. As the principles and practice of the different branches of British medicine are similar in every part of the empire, should not all duly and legally qualified members of either corporation have equal rights and privileges, in the same dominions? This is the case in France, and in all the other enlightened European nations, and throughout the vast continent of America. The third article of the French charter declares, that "all Frenchmen are equally admissible to all *civil* and military employments." While some of our medical corporations are endeavouring to prevent members of their rivals and contemporaries from exercising their professions, the whole empire is completely overrun with illiterate and demoralising empirics, who freely and most extensively practise on the persons and purses of his Majesty's subjects at large, with perfect impunity. A most able and veracious physician has truly asserted that "quackery has destroyed more in this country than the sword, famine, and pestilence, united;" and never was there a period in the history of British medicine, at which the force and truth of this opinion was more obvious than at this day. But the laws relating to the practice and protection of the medical profession in the United Kingdoms, are perfectly defective and impotent, while they are no less contradictory than inconsistent, with the wants and wishes of an improved and more enlightened society.* The general diffusion of knowledge among the great mass of mankind, has given rise to corresponding improvements in every art and science; has introduced such invaluable and improved systems, that the oldest and most venerable institutions *must* adapt themselves to the spirit of the age. The just murmurs, and respectful but firm remonstrances of the medical profession, have not only reached the portals, but entered the temple of the legislature. That profession, the most useful and important to the sublunary condition of mankind, (for the conservation of the public health is the sovereign law of every nation,) has, at length, come under the consideration of the government, and of the senate, the members of which, in their wisdom, will display that great and brilliant spirit of improvement, that so highly distinguished their recent proceedings, and will introduce those changes in the laws regarding the practice of the healing art, which will render it more perfect, and better adapted for the preservation of public health. Some of our Colleges of Physicians and Surgeons, until a very recent period, refused admission to all persons, who had demeaned themselves by practising pharmacy; though without the composition of medicines, neither physicians, or surgeons themselves, could efficiently pursue their respective avocations. These august corporations enforced a similar sapient self-constituted by-law against all those who practised midwifery, as if the structure, functions, and diseases peculiar to the female organs of generation, were not as important, and the diseases as fatal, as those of any other organ in the human body.

* This was admitted by the Marquis of Lansdowne, and the Right Honourable Robert Peel, in a correspondence which I had the honour of having with them, on the necessity of improving the laws relating to the medical profession in the United Kingdoms.[1]

[1] Excerpt from "Introductory Lecture to the Theory and Practice of Midwifery. By Dr. Ryan. Delivered at the Central Infirmary and Dispensary, Greville-street, Hatton-garden."

THE LANCET.

LONDON: SATURDAY, JUNE 30, 1906.

The Meat-supply of London.

IN the outcry over the meat-packing scandals in the United States the public has shown a praiseworthy desire that its meat should come from healthy animals, that these animals should be slaughtered in a humane manner, and that all processes of dressing and preparation of meat should be conducted under reasonably cleanly and wholesome conditions. It is worth while to consider from these aspects the general position of our meat-supply. On the public health side of the question there is already a comprehensive literature, including reports of Royal Commissions and health officers, proceedings of sanitary congresses and conferences, and publications in our own columns and elsewhere in the medical press, but, on the other hand, the record of actual progress is meagre. In the compass of the present article we are able to refer only to a few of the chief questions concerned and to review them in regard to the meat-supply of the metropolis. At the outset it should be recognised that much of the meat which reaches the great Central Meat Market at Smithfield from colonial and foreign sources leaves little to be desired. The animals have been slaughtered in satisfactory abattoirs where each carcass, together with its viscera, undergoes thorough examination by a trained veterinary inspector acting under the orders of the Government concerned. In the case of certain classes of meat arriving in London from New Zealand, Australia, Denmark, Holland, and elsewhere, each carcass which has been passed by the inspector is duly stamped or labelled, while conditions of packing and subsequent transit are well arranged and cleanly. It must be admitted, indeed, that a large part of the imported meat of London—including, we believe, much of the chilled and frozen meat from the United States and Argentina—is in regard to disease and cleanliness more satisfactory than much "home-grown" meat. The reports made by Dr. W. COLLINGRIDGE to the City Corporation on meat inspection at Smithfield market show that examination of imported carcasses thus stamped and labelled and comparison with unmarked carcasses have frequently proved that these marks have a substantial value and on the whole can be relied upon as evidence that inspection has been adequately carried out. Although, however, the practice of marking has increased of recent years, it is not at present obligatory that imported meat should have been submitted to official inspection abroad before it is despatched to London. In the case of meat imported in smaller portions than half or quarter carcasses, especially when it takes the form of boxes of boneless meat, sausage meat, or canned meat, inspection in this country is practically useless to detect diseased conditions of the animal or lack of cleanliness in preparation of the meat. Here the only safeguard is to be able to place reliance on adequate inspection in the country of origin and it is essentially in this matter that the United States system of inspection has so completely broken down. The recent report by Mr. NEILL and Mr. REYNOLDS to President ROOSEVELT not only emphasises the observations which our Commissioner was able to put before our readers last year as to the filthy conditions in which prepared meats may be made up in Chicago and elsewhere, but also shows that the "U.S. inspection" labels on products of this kind have practically no value whatever. In cases where it is impossible to ascertain the condition of the meat by inspection in this country and where there is serious ground for suspicion of its wholesomeness, the best course seems to be to keep it out altogether until satisfactory evidence of its character can be obtained from the country of origin. This is a matter which calls for Government action in the interest of the public health.

With regard to home-killed meat it is notorious that in this country few of the larger abattoirs compare favourably with those of continental cities in their sanitary organisation and in the systematic examination of carcasses. A serious defect at all these abattoirs (including the large establishments for slaughter of imported live cattle at Deptford and Birkenhead) is that carcasses are sent to London with no indication of the inspection which they have undergone and hence the market inspectors at Smithfield are liable to have to spend needless time on unnecessary reinspections. The nearest approach to systematic veterinary inspection in London itself is that which is carried out at the slaughtering premises adjoining the Corporation Cattle Market at Islington. These premises, however, are old and ill-adapted for the purpose. Their lighting is bad and when examining carcasses in the daytime it is often necessary to use candles. The case of private slaughter-houses is far worse. By Scotch law a local authority by providing a public slaughter-house is able, after a sufficient period, to require that all private slaughter-houses shall be closed without compensation. This is not the case in England, where in consequence public abattoirs are not only few in number but are used to a much smaller extent than they should be. In London a large part of the home-grown meat comes from private slaughter houses throughout the country. There are about 300 of these within the area of the county of London. Some are seldom used but at others a considerable amount of killing goes on, while in addition there are many private slaughter-houses on the fringe of the metropolitan area. While in some localities, such as the boroughs of Islington and Paddington, private slaughter-houses receive unusually close attention from the sanitary authority, it must be recognised that as a whole these slaughter-houses are often objectionable in their structure and situation and that the slaughterers are usually ignorant men, unable or unwilling to recognise the existence of disease in the animals which they slaughter, careless as to humanity in killing, and uncleanly in their methods. With few exceptions there is no inspection of slaughtering in these private slaughter-houses at the time of killing or of dressing the carcass for

market. There can be no doubt that at some slaughter-houses, particularly on the outskirts of London, carcasses which are unsound or actually dangerous are frequently disposed of in various ways known to the "slink butcher," and subsequently utilised for food. An influential memorial urging the abolition of private slaughter-houses in London was recently addressed to the London County Council by the Humanitarian League—among its signatories we note Sir T. BARLOW, Sir F. TREVES, and many London medical officers of health—and we are glad to learn that the public health committee of the Council has put forward comprehensive proposals with this object. Even if all its own private slaughter-houses were closed, however, London would continue to draw upon those in the provinces. To provide for this it is proposed to adopt a scheme put forward some years ago by Sir SHIRLEY F. MURPHY of establishing "inspection stations," to which all meat coming into London but not passing through Smithfield Market must be sent, subject to suitable regulations, for inspection. As we pointed out in THE LANCET of March 3rd last, when reviewing Dr. G. S. BUCHANAN'S report to the Local Government Board on administrative questions regarding tuberculosis in pigs, the provision in London of such "stations," marking of meat which has been already subject to satisfactory inspection at public abattoirs at home and abroad, and special attention in the Corporation markets to "unmarked" meat, are measures which in conjunction would effect a very great improvement in the character of the London meat-supply and should cause comparatively little interference with the great trade interests concerned.

We have left ourselves little space to refer to uncleanly conditions of manufacture of various meat products in London or to the use of decomposing or diseased meat in preparation of sausages, potted meats, and the like. That these are matters requiring much closer and more systematic attention than they have hitherto received is obvious from reports of medical officers of health of London boroughs and from accounts of police-court proceedings which appear from time to time. It is to be feared that dealings in meat of doubtful character are not confined to the small trader. A good illustration of this may be found in a recent report by Dr. G. NEWMAN on the practice of a large firm of sausage manufacturers in Central London. The most practicable way of dealing with this evil seems to be the more frequent employment by borough councils or by the London County Council, or both, of inspectors with special training in methods of food preparation. It may be objected that London is already over-inspected and the objection has some force in cases where the inspector has a little knowledge of many things, real acquaintance with none, and a desire to magnify his importance by prosecutions for trivial offences. But experience already shows that inspectors, specially chosen and instructed for the purpose of safeguarding the public from uncleanly and dangerous methods of food preparation and acting under the direct control of the medical officer of health, are welcomed by many meat traders who are anxious to conduct their business on satisfactory lines but at present are seriously handicapped by the competition of others whose practices, if cheap, are also decidedly nasty.

The Staffs of Suburban Hospitals.

THE LANCET of May 12th contained a report of a meeting of medical practitioners residing in or around Hampstead, a meeting which was called by the Hampstead division of the British Medical Association for the purpose of discussing the management of the Hampstead General Hospital and of considering certain resolutions which had previously been passed by the division itself. As would be natural or inevitable in the circumstances, the questions at issue were chiefly regarded from a local point of view; but many of them would appear to involve principles of wide application, and, in so far as this may be the case, they have an undoubted claim to careful consideration at the hands of the profession generally. Mr. F. R. HUMPHREYS, the chairman of the meeting, in the course of a brief survey of the history of the hospital, said that it was started in 1882 as a home hospital and nursing institution with no free beds; that is to say, we presume, as an institution for the benefit of comparatively well-to-do residents in the locality and for the reception of sick persons who could not be conveniently nursed in their own homes. In 1893 the name was changed to "Hampstead Hospital" and free beds were added. In 1896 an out-patient department was opened and in December last the institution was removed to a new building containing 64 beds, which it is intended to increase to 100. Of these beds 13 are for the use of paying patients and the rest are to be free. The out-patients in 1905 numbered 2393, and 75 per cent. of them came from Kentish Town. On its removal to the new site the hospital received a single donation of £20,000, and it has also received grants from the Hospital Sunday, Saturday, and King Edward's Funds. The authorities of the last-named Fund had intimated their intention to recommend a further grant of £5000 and had suggested the appointment of a consulting staff, a recommendation which was not approved by practitioners in the locality and which was one of the immediate causes of the meeting. Up to the present time, as we gather, the hospital has been staffed by local general practitioners, and it does not appear what facilities, if any, have been afforded to local practitioners not on the staff to attend their own patients either in the free or in the paying beds.

Many of the arguments employed by speakers at the meeting were evidently directed to show that the hospital is an unnecessary institution. The chairman said that Hampstead is an exceptionally healthy place, with a death-rate of only 9·3 per 1000, and that one-third of these deaths were of persons from outside, sick persons "imported by philanthropists." There were, he thought, no residents in Hampstead, "above paupers," who could not pay the provident fees current in the locality, and there were clubs, friendly societies, and a nursing institution. Mr. H. W. ARMIT, in proposing the first motion, "that an out-patient department in Hampstead is unnecessary," dotted the chairman's i's and crossed his t's. He said that he and those acting with him desired to safeguard the interests of the general practitioner and to declare that such a department was not required in the district. Members of the staff defended the department from the criticisms of Mr. ARMIT and other speakers, but the

motion was carried by 40 votes to 7, and four other motions were then put *en bloc* and carried *nemine contradicente*. These recommended that casualty patients should be seen only once and then referred to ordinary sources of relief, that there should be greater facilities for the attendance upon in-patients of the general practitioners of the neighbourhood, that there should be a time limit, as well as an age limit, to appointments on the staff, and that the outside medical profession should be adequately represented on the board. Finally, it was moved, "That it is desirable, both in the interest of the district and of the hospital itself, that the Hampstead Hospital be carried on as a purely local institution and not as a large general hospital, and therefore that an acting staff of consultants is not in accordance with the spirit of its constitution." This also was carried *nemine contradicente*, and its effect, *quantum valeat*, is, of course, to refuse compliance with the recommendation made by the managers of King Edward's Fund and therefore possibly to imperil the further assistance from that source which was expected by the governing body of the hospital.

The question whether it is desirable to establish or to maintain a hospital in a particular suburb is clearly one which should be decided in every case after a careful and impartial survey of local circumstances and requirements; but, given the hospital, the question of the division of the work between a local and a consulting staff is of a different nature and may be referred to principles and considerations which will be applicable to almost all occurring cases. Speaking quite generally, the work done by a consultant, and especially by an operating surgeon, is sufficiently distinct from that done by a general practitioner to render it inconvenient that either should invade the province of the other. In a suburban hospital officered by local practitioners and with a consulting staff many of the cases admitted would fall within the ordinary daily duties of the former gentlemen and would be treated by them just as easily and as successfully as their private patients. But a case of acute glaucoma, or of strangulated hernia, or of perforated intestine would, ordinarily speaking, be a source of some embarrassment to a general practitioner. He would know perfectly well what ought to be done, but the actual practical accomplishment would be outside his daily habits of work and action. He might often be doubtful of his own power to deal in the best possible way with the emergency, and a summons to the appointed consultant would relieve him from an irksome responsibility and would place it upon shoulders accustomed to the burden. Everybody would understand the principle of division of labour under which the consultant was required, and nobody would interpret his being called as a confession of any want of a kind of skill which the local officer could properly be expected to possess. On the other hand, if the local officer were summoned to any case requiring immediate operation, and had no appointed consultant to whom he could apply, it would frequently be needful for him to call in one of his neighbours to lighten his responsibility or to render him assistance, and then the local story would be that Mr. SOMEBODY could not undertake the treatment or the operation himself and that he had been compelled to send for Dr. A. N. OTHER. The work of general practice, moreover, would often place serious impediments in the way of prompt and punctual attendance upon emergencies; and difficulties hence arising, which might easily give rise to what newspapers call "hospital scandals," would be provided against by a resident medical officer and an appointed consultant, to whom, in time of need, the resident could apply. The strangulated hernia might find both Mr. SOMEBODY and Dr. A. N. OTHER fully occupied with a midwifery case. It is necessary to remember, moreover, that appointments on the staff of a local hospital frequently give great advantages to the holders who are often supposed by the public in the vicinity to be in some way superior to, or cleverer than, their competitors who are not so distinguished. Much heart-burning has thus often been occasioned and we are in entire accord with the resolution of the Hampstead meeting which demanded greater facilities for attendance upon in-patients by the general practitioners of the neighbourhood. It is eminently to the advantage of the public that as many medical practitioners as possible should possess opportunities of conducting treatment in the favourable circumstances which a hospital is intended to secure; and there is no manner of doubt that the institution of cottage hospitals has been of unmixed benefit to the community. A hospital, broadly speaking, is an institution in which, by reason of special fitness and special surroundings, the management of the sick can be better, and therefore more successfully, conducted than is possible in their own homes, more especially in the homes of the really or comparatively poor; and a practitioner who has to strive against the illnesses of the poor will strive with better heart, will be better able to apply the resources of medicine or surgery, and will garner a more valuable and more fruitful experience if he is able to send his patient into a hospital and to follow him there. Too many hospitals have fallen more or less into the hands of cliques or parties by whom first principles are forgotten or ignored. The great general hospitals of the metropolis or of provincial cities are the proper working grounds of professional pre-eminence, and appointments to them are the proper rewards of the highest medical and surgical capacity cultivated by the highest diligence. In suburban localities and in many provincial places analogous conditions can hardly be said to exist, and the utility of hospitals alike to the profession and to the public would be definitely enhanced by rendering them available to all medical practitioners and by the appointment of consultants whenever local circumstances would permit.

Pulmonary Tuberculosis in Calcutta.

CONTINUED observation and research confirm Professor HIRSCH'S statement that pulmonary tuberculosis is a disease of all times and all countries. It is true that in certain regions of the earth the disease is all but absent, such as in the Arctic regions, deserts, and in places situated at high altitudes—that is to say, as Dr. A. RANSOME has pointed out, just where the population is most scanty. Wherever population is dense there will the death-rate from pulmonary tuberculosis be found to be high. The lack and neglect of

ordinary hygienic precautions, as is well known, considerably encourage the prevalence of disease. No race is exempt, although some writers have stated that Jews are less afflicted with tuberculosis than are Christians. The evidence on this point, however, is conflicting and, as Dr. PERCY KIDD has stated, there is reason to believe that this favourable estimate applies only to the well-to-do members of the community. Further investigation must decide whether the alleged immunity exists or not. Some nationalities, on the other hand, seem to be more prone to be attacked than others. Professor HIRSCH states that among the Kanakas—the natives of New Caledonia—two-fifths of the total mortality is due to pulmonary tuberculosis. Some of the other black races also readily acquire the disease.

Some of the above points are well exemplified by a report recently issued on "Phthisis in Calcutta, 1905," by Dr. T. FREDERICK PEARSE, special health officer. For some time it has been recognised that pulmonary tuberculosis is very prevalent in Calcutta and is responsible for a high percentage of the deaths. The returns of the causes of death, however, have not been trustworthy since they were based on the mere statements of relatives and friends at the several burning ghâts and burial grounds. The exact prevalence of the disease, therefore, could not be correctly estimated. During the year 1905 every death, except those occurring in hospital, was inquired into by the officers of the plague department, and from the clinical reports and histories obtained it has been possible to estimate much more accurately than before not only the total extent of this disease but also its incidence in the several parts of the city. The value of these inquiries is shown by the fact that less than 50 per cent. of the deaths from pulmonary tuberculosis were recorded as such in the usual way at the burning ghâts and burial grounds. The disease is shown by the report to be much more prevalent than was previously supposed and more fatal than was formerly estimated from the registers. For the year 1905 there were 1648 deaths returned by the plague department as being due to pulmonary tuberculosis. This number constitutes the apparently low rate of 1·9 per 1000 of the population of the whole city. In Bombay the rate is 3·8 per 1000 and for the Indian jails 2·93 per 1000. Dr. PEARSE considers that this apparently low rate for Calcutta is brought about by the exceptional age and sex constitution of the population. Two-thirds of the population are males, and pulmonary tuberculosis in that city being only half as fatal amongst males as amongst females this disproportion reduces the total rate. Again, there is a large excess of persons between the ages of 20 and 50 years, especially males, which also tends considerably to lower the total rate. The excessive prevalence of pulmonary tuberculosis amongst females in Calcutta is, then, one of the most striking features of the investigation. Among males the death-rate was only 1·4 per 1000, which is almost as low as the general rate for England, whilst among females the rate was more than double—viz., 2·86 per 1000. Equally noticeable is the extreme prevalence of the disease amongst Mahomedan females, the rate for whom works out at no less than 4·6 per 1000. The reasons for the excessive rate amongst the women are not difficult to find. It may be interesting first to notice the comparative incidence amongst males and females respectively in this country. The late Dr. WILSON FOX, from statistics officially compiled by Dr. W. OGLE, showed that if all ages be included the difference in the death-rate of each sex from "phthisis" is so small that the rates may be considered as practically equal to each other. But if instead of taking the aggregate rates—that is, the death-rates of each sex *en bloc*—the rates at each successive age period are considered, there are found to be remarkable differences between the sexes. In the first quinquennium of life (0—5 years) the male and female rates are nearly the same, the male being only very slightly the higher. In the five age periods, covering between them the interval between the ends of the fifth and thirty-fifth years of life, the female rate is in marked excess of the male rate, the excess being especially notable in the periods from 10 to 20 years of age. At no age, however, is the difference between the liability of the sexes to tuberculosis so marked as in Calcutta. After the thirty-fifth year in this country the male rate becomes the higher and remains so in each age period to the end of life. It is then in the conditions of female life in Calcutta that the reasons for the excessive mortality of the women from pulmonary tuberculosis must be sought and not in any peculiarity of the sex. These conditions are to a certain extent known and may be summed up generally, as Dr. PEARSE remarks, as "deficiency of fresh air." Owing to the confined life which the native women lead in India, especially amongst the Mahomedans, all the requirements for the rapid spread of the disease are fulfilled. This want of good hygiene is further emphasised by the relative occurrence of tuberculosis in the different classes of dwellings. The disease is found to be much more common amongst the population dwelling in huts than in those who inhabit pucca houses. The former are much more densely crowded than the latter. The average number of occupants per room in a hut is stated to be 2·4, and it is therefore not surprising that tuberculosis should be so prevalent under such conditions.

From this report it is evident that pulmonary tuberculosis is accountable for a large number of deaths in Calcutta and that it is the conditions of domestic life amongst the natives which are mainly responsible for the high mortality amongst the women and to remedy this state of affairs would be a gigantic undertaking. The opinions of the local medical men as to how much might be accomplished by the institution and enforcement of sanitary laws would be interesting. Judging, however, by the difficulties that occur in attempting to deal with epidemics of plague, it is to be feared that an almost insurmountable task presents itself in trying to prevent the spread of tuberculosis. A total change in the manner of living of the natives would be necessary before any real improvement could be expected. There are, however, many native medical practitioners who could doubtless effect some benefit by an attempt to instruct their patients in the elementary precautions necessary to prevent infection. The deep-rooted prejudice that exists amongst the natives against sanitary reforms would probably be one of the chief obstacles. But the present loss of life from tuberculosis is deplorable and calls for some attempt to remedy it.

Annotations.

"Ne quid nimis."

ARMY NURSING.

IT has always been hard—and the difficulty does not of late seem to be growing less—to get the right sort of recruit for the army, and when he has been obtained he has to undergo a long course of training to fit him for the duties of a soldier. It follows, therefore, that it is not easy to replace him. It nevertheless commonly happens that the first thing which any Government bent on retrenchment does is to reduce the rank and file of the army. It is a prompt and tempting method because it is ready to hand and easily carried out. Whether it is a wise or in the long run an economical policy is another matter. The easiest and readiest course is adopted instead of making sure beforehand whether in some other direction or by instituting some business reform or alteration of system the same end might not be more easily and wisely reached. It seems to us that we have a case in point in regard to Queen Alexandra's Imperial Military Nursing Service. It has long been known that the position of affairs in respect of army nursing has not been altogether satisfactory and that, so far as the working of the new system is concerned, it has not proved as successful and well-adapted to the purpose as might be wished. Moreover, it is represented that the system is unnecessarily expensive, that there is not anything like sufficient work in military hospitals in this country in times of peace for the number of lady nurses employed in them, and that, in short, the present system and scales stand in need of considerable reorganisation and reduction. The subject does not lend itself to any brief statement and discussion. We may, however, call our readers' attention to a long and able article that appeared in the *Broad Arrow* of June 16th under the heading of "Queen Alexandra's Imperial Military Nursing Service," in which it is exhaustively treated. There are two points to which, however obvious in themselves, we may allude in order to anticipate any possible misapprehension and because they are not the points at issue in the present case. The first is that it goes without saying that no one questions the Queen's most kindly interest in all that concerns, and can contribute to the care and comfort of, the sick and wounded, and the other is that everybody recognises in the present day the importance of skilled nursing by ladies. So far as the army is concerned, however, the conditions and circumstances are obviously not identical with those which obtain in civil life and in civil hospitals, and in any case they form no justification for the maintenance of a staff of nurses far in excess, if such be really the case, of the requirements of a peace organisation. This is a matter calling for Mr. Haldane's attention. Nor must it be forgotten—for this is a most important point—that as regards preparation for war it is essential that a sufficient number of men of the Royal Army Medical Corps should in any case be so trained in nursing duties as to enable them to take their place in the field during war in such positions and circumstances as do not admit of the presence of female nurses. It is not easy to serve two masters, the feeling is to hold to the one and to despise the other, and it is, we think, to be regretted that the "nursing" section is no longer popular with men of the Royal Army Medical Corps, seeing that their services will again have to be utilised largely in this respect on the outbreak of war.

A LOCAL CENSUS.

THE corporation of Pudsey, a small municipal borough in the West Riding of Yorkshire, has set a good example to other sanitary authorities by sanctioning and recently carrying out a second local census of the population of that town, a previous local intermediate census enumeration having been effected there in 1896. It appears from the census report for 1901 that the enumerated population of this borough increased from 13,444 in 1891 to 14,907 in 1901. Dr. W. L. Hunter, the medical officer of health of the borough, reports that its population in the middle of this year, based partly upon the rate of increase during the ten years 1891–1901 and partly on the excess of births over deaths, was estimated at 15,179, but that the recent local census showed that the population does not exceed 13,557. The population of the town shows, therefore, a decline of 1350 from the number enumerated at the last census in 1901 and scarcely exceeds the number returned 15 years ago, in 1891. At this local census no schedules were left at the houses, the required facts (merely the numbers of persons aged respectively under five and above five years of age residing in each inhabited house) being inserted directly into the enumerator's book, one enumerator acting for each ward of the borough. The decline of population in the borough is attributed to migration, the result of trade conditions. The medical officer states that the desired information as to the present population of the borough was accurately obtained "without undue expense," but more definite information as to the cost of this local census and the precise means taken to insure practical accuracy of the result would be interesting and valuable to other sanitary authorities disposed to follow the example set by the Pudsey corporation.

THE INFLUENCE OF INCREASED ATMOSPHERIC PRESSURE ON MAN.

Mr. Leonard Hill, F.R.S., and Mr. M. Greenwood, jun., have contributed to the April number of the *Proceedings of the Royal Society* (Biological Series) the first portion of the results of an investigation of the effects of high pressures of air upon themselves. Previous records have shown that very great risk is incurred by workers in caissons at pressures of + 3 atmospheres and by divers at depths of from 100 to 150 feet. The Admiralty sets 120 feet as the limit for its divers, while the most daring pearl and sponge fishers sometimes reach depths of 145 feet, at which depth accidents often occur. It is interesting to note that Lambert, the famous diver, who salved £100,000 at a depth of 160 feet, remained below about 20 minutes at each descent, occupying the same time in ascending. But on the last journey he stayed below longer, with the result that he permanently lost the power to retain his urine. Lambert was the man who with rare courage stopped the flooding of the Severn tunnel. He descended by a shaft, traversed a quarter of a mile of the dark tunnel which was full of water, and closed the flood gates which had been left open. The deepest dive on record is one of 204 feet (+ 88½ pounds pressure), but the diver died from the effects of too rapidly coming to the surface. Mr. Hill and Mr. Greenwood used for the experiments on themselves a steel cylinder placed at their disposal by Messrs. Siebe and Gorman. It had a capacity of 42·2 cubic feet and was provided with bedding, electric light, bell, and telephone. Compression was effected by means of a pump which could raise the pressure to + 6 atmospheres in about 40 minutes. Two decompression taps were provided and a constant ventilation was maintained at the rate of 25 litres per minute in order to avoid an accumulation of carbon dioxide. They found that they could undergo a total pressure of seven atmospheres without untoward effects, provided that decompression was gradually effected and the capillary circulation was aided by repeated contractions of the muscles, movements of the joints, and changes of posture. The danger of rapid decompression lies in the fact that at high pressures abnormal quantities of nitrogen are dissolved in

the blood and if the period of decompression is too short the gas is disengaged as bubbles in the capillaries and tissue spaces, with the result that embolism of a vessel may occur. The experiments confirm the conclusions of H. Hersent of Bordeaux and others which indicate clearly the danger connected with short decompression periods. Every death or case of paralysis from air embolism must be set down to the negligence of the contractor in not insisting upon a sufficient length of time for decompression. Mr. Hill and Mr. Greenwood have placed on record the subjective changes which they experienced during the progress of their work. They found that apart from changes in the voice and anæsthesia of the lip, the subjective effects of increased pressure depended upon psychical conditions such as anxiety and excitement. One of the investigators had not practised beforehand the opening of the Eustachian tubes and accordingly was most disturbed at the first experiment. The sensations of increasing deafness and intolerable discomfort in the ears with no obvious cause and the inability to gain relief by the recognised method of swallowing produced a condition of mental distress which led him to terminate abruptly the experiment. But after learning the method of opening the Eustachian tubes the trouble did not occur in subsequent experiments. The investigation also showed that changes in the percentage of carbon dioxide in the alveolar air are due solely to physical variations and not any increase or diminution in the respiratory metabolism; and further, that, contrary to Snell's opinion, the presence of carbon dioxide in the respired air does not exercise a peculiarly unfavourable influence under high pressures.

OFFENSIVE SMELLS IN THE HOUSE OF COMMONS.

THE proceedings in the House of Commons on June 21st were interrupted by a Member suddenly asking whether the Government was aware of the presence of sewer gas in the House? "The same thing occurred yesterday. Can anything be done to purify the atmosphere of the House? It is simply poisonous." Mr. Harcourt subsequently reported that what had happened was that a barge filled with gas liquor had been taken down the river for disposal at sea. The same barge the day before had given rise to a similar complaint and he would endeavour to make arrangements with the gas company for the adoption of some other hour for conveyance. There are two interesting points in connexion with this incident. First of all, it is evident that the system of ventilation at the House of Commons must be in working order, as otherwise the smell complained of would not so quickly have pervaded the chamber. It is also clear that the air-supply is drawn from the direction of the river and it is open to question whether this is the best source, apart altogether from the fact of barges with offensive cargoes floating down the stream. It is conceivable that bad river air may have some connexion with the frequent complaints made of the want of vitality of the air in the House of Commons and with the marked way in which so many of its members are attacked by influenza. The other point is that apparently the carrying down the river of matters which are admittedly offensive is tolerated even by His Majesty's First Commissioner of Works, for he said that he would make arrangements with the gas company for the adoption of some other hour for conveyance. In our opinion this pestilential traffic should be stopped altogether and it is simply monstrous that such offensive stuff should be dumped into the sea. Mr. Harcourt said that it was gas liquor. This must be a mistake as gas liquor is a valuable asset, being a source of ammonia, cyanides, and other substances. He most probably meant spent gas-lime for which there is practically no use. This waste product is a singularly offensive material and, moreover, is very destructive to fish life. In all these circumstances surely it is high time that this clumsy and offensive method of disposing of foul gas-lime should be prohibited. We must confess considerable surprise that the incident in the House of Commons was allowed to end where it did and we should like to see the question reopened in the interests not only of the Members of Parliament but of the public also.

A DANGEROUS MIXTURE.

IT has recently been shown by Mr. J. Rutherford Hill in the *Pharmaceutical Journal* that the solution of strychnine hydrochloride of the 1898 British Pharmacopœia is incompatible with solutions of magnesium hydrato carbonate. It has been a common practice until recently among pharmacists to prepare peppermint and other aromatic waters by triturating the essential oil with light carbonate of magnesium, adding water and filtering. But owing to the slight solubility of the magnesium salt in water it has been largely replaced by calcium phosphate, talc, and other insoluble substances. When aromatic waters prepared by the aid of magnesium carbonate were prescribed with the acid solution of strychnine hydrochloride of the 1885 Pharmacopœia no change took place, but in the case of the present official solution, which does not contain free acid, the strychnine gradually crystallises out. This change was noticed owing to an empty three-ounce dispensing bottle being sent to a pharmacist to be refilled with a mixture containing one fluid drachm of the official strychnine solution in three fluid ounces of peppermint water. The inside of the bottle was found to be coated with small crystals representing the greater part of the strychnine. It is obvious that an incompatibility of this kind presents two serious inconveniences. In the first place, the patient does not take the full amount of strychnine ordered by the prescriber and in the second place there is considerable danger of the patient taking the bulk of the alkaloid in the last dose. Mr. Hill's valuable communication has probably given this unscientific method of preparing aromatic waters its death-blow, while it has afforded an interesting and important example of the unexpected results that may attend the modification, in however slight a degree, of official formulæ. It emphasises, too, the necessity of a strict adherence to the Pharmacopœia, which directs aromatic waters to be prepared by distillation and without the use of magnesia or other substances.

THE ETIOLOGY OF GENERAL PARALYSIS.

AT a recent meeting of the New York Neurological Society a discussion, the report of which appears in the *Journal of Nervous and Mental Disease* for March, was opened by Dr. J. Collins upon the subject of General Paralysis of the Insane, turning chiefly upon the question of etiology. Having analysed 100 cases of this disease which had occurred recently in his practice Dr. Collins found that in 23 there was a family history of organic or functional nervous disease. A subsequent speaker elicited a like history in 32 per cent. of 250 cases. Recent works on insanity state that insane or neurotic inheritance is present in from 40 to 50 per cent. of cases. The views held upon this point have changed of recent years, for 15 or 20 years ago it was commonly taught in this country that general paralysis was peculiar amongst mental diseases in that insane or neurotic inheritance was but seldom found in cases of that disease. Various speakers gave their experience in regard to the relationship of syphilis and general paralysis; these had ascertained syphilis to be present respectively in from 55 to 62 per cent., in from 59 to 64 per cent., and in 45 per cent. of their cases; in the last instance the figures refer to males only, females having been found to be infected in 20 per cent. of the cases. In many of these instances syphilis was regarded as having been acquired merely on the "admission" of the patient, without any corroborative evidence, objective or otherwise; and therefore the deduction made is of limited value. Statistics as to the causal influence of syphilis in

general paralysis vary enormously, modern authors giving figures ranging from 30 to 90 per cent. Moreover, a point which is frequently lost sight of and the neglect of which detracts much from the value of statements made upon this subject is that syphilis is very rarely present alone but exists usually in combination with other causative agencies the possible influence of which cannot be ignored. As regards the interval between the date of infection with syphilis and the appearance of the earliest symptoms of general paralysis, the opinion expressed was that whilst this might in rare cases be even less than one year it is commonly very much longer, a period of about 11 years being frequent, and even the latter may be largely exceeded. In the course of the discussion Dr. Allen Starr made the statement that in about 80 per cent. of a large number of cases of general paralysis which he had analysed physical symptoms appeared before mental symptoms. Whilst it is known that physical disorders are sometimes the earlier to appear the above proportion is so enormous that we are almost compelled to believe that subtle mental changes, as of character, judgment, and aptitude, must in very many instances have been overlooked. The discussion brought out the importance of making a careful physical examination in cases of so-called neurasthenia, by means of which significant early symptoms of general paralysis, such as facial tremor, alteration of pupillary reactions and of knee-jerks, may be recognised. The difficulty of diagnosing the disease from conditions due to cerebral syphilis and the importance of carrying out a course of anti-syphilitic treatment in doubtful cases were alluded to. A history of the abuse of alcohol had been obtained by certain observers who took part in the discussion; of 250 cases this was ascertained in about 25 per cent., a proportion which agrees with that given in recent works—namely, from 20 to 30 per cent. But here again the observation made above respecting the causative influence of syphilis will apply: alcohol can but rarely be dissociated from other factors in causation. It is nevertheless looked upon by many competent observers as a genetic factor only second in importance to syphilis. Syphilis and alcoholism, however, prevail to an extent compared to which general paralysis is a rare malady and observation shows that in most cases of the latter disease a combination of causes, psychical and physical, is present. Much labour is clearly necessary before we can adequately appreciate the relative value of these and ascertain whether they act directly or merely by preparing the way for the operation of toxic agencies.

WHAT IS WHISKY? THE APPEAL.

Mr. Fordham's view that spirit produced by the patent still from a mash consisting to a large extent of maize, to which a "dash" of whisky made from barley malt had been added, cannot be considered as either Scotch or Irish whisky must so far stand, inasmuch as the proceedings for appeal concluded at the sessions house, Newington, on Monday last, with the announcement that the bench of magistrates was equally divided and therefore there could be no judgment. It is possible that the appellants will make application to quarter sessions for a re-hearing of the appeal, in which event we should not be justified in making any comment on the aspects of the case. The proceedings are costing a considerable sum of money and it is unfortunate that they should have ended in this fiasco. We cannot help thinking that the trade would be well advised if they ceased to fight the matter out in court and if they would come to an agreement all round to make a clean breast of it and adopt an honest, straightforward description of their goods. There are firms who do not hesitate to declare accurately the nature of the goods they are selling, whether they are pot-still all-malt or patent-still spirits, or a mixture of both, and surely if such a policy succeeds in one or more cases there can be no reason why it should not succeed in others. If, as many declare it to be the fact, the public prefer light grain spirit or a blend to a pure full all-malt spirit, the fact that the spirit is correctly described on the label, as the case may be, should not disturb this preference in the least degree. The public must be the judge in the question of taste and they would welcome being frankly dealt with. The hatchet might thus be buried and an end put to costly and vexatious proceedings.

THE ROYAL SANITARY INSTITUTE.

THE Twenty-third Congress of the Royal Sanitary Institute will be held from July 9th to 14th at Bristol under the presidency of the Right Hon. Sir Edward Fry. On the first day at noon there will be a reception of members and delegates in the Council House by the Lord Mayor of Bristol, Mr. A. J. Smith, after which a public luncheon will be held in the Royal Hotel. The inaugural address will be delivered in the Victoria Rooms by the President at 8 P.M. The sectional meetings will commence on July 10th, the first, that of "Sanitary Science and Preventive Medicine," being presided over by Sir William Collins, M.P.; the second, "Engineering and Architecture," by Mr. Edwin T. Hall; and the third, "Physics, Chemistry, and Biology," by Mr. W. N. Shaw, F.R.S. The special conferences include "Municipal Representatives," "Medical Officers of Health," "Sanitary Inspectors," and "Veterinary Inspectors." There will also be conferences of women on "Hygiene" and on "The Hygiene of School Life." The lecture to the Congress will be delivered by Professor C. Lloyd Morgan who will take for his subject "Relation of Heredity to Physical Degeneration." Nearly 200 authorities, including several county councils and county boroughs, have already appointed delegates to the Congress. With the object of giving a practical illustration of the application and carrying out of the principles and methods discussed at the meeting a health exhibition of apparatus and appliances relating to health and domestic use is being organised.

OPERATIONS FOR NON-EXISTENT APPENDICITIS.

AT a meeting of the Académie de Médecine on May 29th M. Dieulafoy made the statement that many persons suffering from typhlo-colitis are operated on for appendicitis which does not exist.[1] The importance attaching to any announcement by the eminent French surgeon is increased in this instance by the fact that he is one of the most extreme advocates of the operative treatment of appendicitis, holding that it is the sole efficacious and rational method. "Remove the toxi-infectious appendicular focus before it can become fatal" is his rule. He related 12 cases of which the following are some examples. A man was admitted into the Hôtel Dieu who had undergone operation for "appendicitis." The surgeon sent with him the appendix which was sound. The patient was suffering from an attack of muco-membranous typhlo-colitis which followed the same course as other attacks which occurred before the operation. In a second case M. Dieulafoy saw in consultation a young man who had suffered for a long time from muco-membranous typhlo-colitis. Finding a scar in the right iliac fossa he said, "You have been operated on for appendicitis." "Yes," replied the patient, "for appendicitis which I had not." In a third case a woman suffering from the same disease gave the same history. She continued to suffer just as before operation. On examination there was pain in the right iliac fossa like that of appendicitis. In a fourth case M. Dieulafoy saw in consultation a young woman who had suffered for

[1] THE LANCET, June 23rd, 1906, p. 1793

two years from muco-membranous typhlo-colitis. Without evident cause attacks occurred in which there were great pain, diarrhœa, and passage of mucus and large quantities of membrane. In the recent attacks the pain had predominated in the right iliac fossa and appendicitis had been diagnosed by a practitioner and a hospital surgeon. Operation was consequently proposed which did not displease the patient who hoped to obtain from surgery a cure which medicine had failed to give. On examining the patient, who recently had had a severe attack, the abdomen was found to be supple and its wall flaccid. On pressure sharp pain was felt in the transverse colon and in the angle of the ascending colon but more severely in the right iliac fossa. However, this predominance of pain in the iliac fossa was not sufficient, in M. Dieulafoy's opinion, to establish the diagnosis of appendicitis. He is not one of those who think that appendicitis is a frequent result of entero-colitis. Long experience has shown him that predominance of pain in the right iliac fossa during an attack of typhlo-colitis is due to typhlitis and not to appendicitis. But his colleagues took the opposite view and the appendix was removed. It was found to be absolutely sound even on microscopic examination. In some of these cases of typhlo-colitis the appendix has appeared perfectly sound when removed but microscopic examination has shown fibrous bands and hypertrophied lymphatic follicles. To such cases the term "microscopic appendicitis" has been applied. M. Dieulafoy is no believer in this condition, for it is extremely rare not to find such changes in the appendices of adults who have died from any disease. Still another lesion has been described by microscopists—"hæmorrhagic folliculitis." But the hæmorrhage into the follicles is simply the result of the traumatism of the operation.

A CAMBRIDGE MEDICAL "COMMEMORATION."

ON June 20th there took place at Emmanuel College, Cambridge, an event which is not without significance in connexion with the progress of medicine and particularly so as regards the development of the medical school of the University of Cambridge. Emmanuel College, which now numbers upon her roll some 120 fully qualified medical men, many of them holding distinguished positions in one or another branch of the profession, conceived the happy idea of devoting this year's commemoration of benefactors solely to her medical sons, this being, we believe, the first medical "commemoration" ever held either in Oxford or Cambridge, and the manner in which this gracious act was appreciated by old Emmanuel men must have proved extremely gratifying to the Master and the Fellows. The gathering was indeed such a conspicuous success in every way that it will be a surprise to us if the example is not followed by similar functions at other colleges both at Oxford and at Cambridge. The guests, who came from all parts of the country, assembled in the College chapel at 6.30 P.M. when at the commemoration service a novel departure was made in the shape of an admirable lay sermon from Mr. W. N. Shaw, F.R.S., D.Sc., now director of the Meteorological Office and for many years Fellow and tutor of Emmanuel College. One of the lessons was read by Mr. W. Chawner, the first lay master, and the other by Mr. A. C. Seward, F.R.S., one of the tutors. The commemoration dinner, which was held subsequently in the College hall, was confined to the Master, the Fellows, and medical graduates of the College with the exception of the welcome and fitting presence of Dr. T. Clifford Allbutt, Regius professor of physic, and Mr. Howard Marsh, professor of surgery. After the toasts of "The King" and "The College," which were proposed by the Master, Mr. Seward gave that of "The Preacher" in a speech in which he dwelt upon the many services of Dr. Shaw both to Emmanuel College and to science. Mr. T. H. Kellock, one of the surgeons at the Middlesex Hospital, proposed "The Cambridge Medical School," and to this the two professors replied, while "The Guests," which was proposed by the Bursar, Mr. J. N. Peace, was responded to by Dr. H. T. Bulstrode of the medical department of the Local Government Board and Mr. S. V. Pearson who rowed in the Cambridge boat in 1898. The visitors were the guests of the College during the night, some of them sleeping, perchance, in rooms which they occupied as undergraduates well back into the nineteenth century. After breakfast in the College hall the visitors carried back with them to their homes the pleasantest impression of a reunion which will remain long in their memories. Although this College dates her foundation no farther back than some 300 years her record has been an eventful one, and she has exercised no mean influence upon the universities of the West, in that one of her sons, John Harvard, leaving these shores in 1637, died in Massachusetts in the following year and in dying founded Harvard University, which in her turn has become the mother of the other universities of the American Republic. Of Harvard University Mr. Choate, the late American ambassador in this country, said in unveiling the Harvard memorial window which he presented last year to St. Saviour's Cathedral, Southwark: "It is not unworthy to be compared with Oxford and Cambridge, those ancient nurseries of learning from which it drew its first life. And the name of John Harvard shares the fame which mankind accords to the founders of States. From the beginning until now it has occupied the foremost place in America as a radiating source of light and leading. In all the great movements of progress by which the United States have advanced from that little handful of storm-swept immigrants on the Atlantic coast to the Imperial Republic of to-day Harvard University and its sons have had their full share; and without disparagement to her younger sisters, who are many and great, it may be truly said that as she was first in time, she has always been first in position and influence." Amongst Harvard's numerous *alumni* she counts Theodore Roosevelt, President of the Republic, and there is a curious and fitting coincidence in the fact that while Emmanuel College was holding the first medical commemoration Harvard University was making ready to celebrate the opening of her new medical schools.

INFLAMMATION OF THE SUBDELTOID BURSA.

IN the *Boston Medical and Surgical Journal* of May 31st Dr. E. A. Codman has called attention to the cause of stiff and painful shoulders which has attracted little attention—inflammation of the subdeltoid bursa which lies beneath the deltoid muscle and extends under the acromial process. This bursa has received little notice from anatomists. Its roof is formed by the periosteum beneath the clavicle, the coraco-acromial ligament, the acromion, and the upper part of the fibres of origin of the deltoid muscle. Its base is formed by the tuberosity of the humerus and the tendons of the short rotators which are inserted into the latter. The causes of inflammation of the bursa are the same as those of arthritis—injury, rheumatism, gonorrhœa, tuberculosis, and so on. Prolonged fixation of the arm, such as occurs after operations on the breast, may be followed by the formation of adhesions in the bursa. The symptoms of bursitis may be of all degrees of severity from discomfort in raising the arm to firm fixation. In cases of acute inflammation the shoulder-joint is fixed by reflex spasm. But slight rotation and abduction of the arm are always possible (about 10°) because this degree of motion does not call into play the inflamed bursa. Local tenderness may be so definite as to allow the bursa to be mapped out. Pain is a constant symptom and is especially annoying at night. Its distribution is peculiar:

it is felt down the arm in the area of the external or internal cutaneous nerve. Demonstrable effusion is not uncommon but is somewhat disguised by the overlying tissues. The diagnosis from arthritis of the shoulder-joint is determined by the persistence of a slight degree of painless motion. In inflammation of the shoulder-joint spasmodic fixation is nearly absolute. Again, palpation from the axilla is painless in bursitis, while tenderness is elicited in arthritis. In effusion into the joint the angle between the humerus and the inner border of the scapula is obtuse; in effusion into the bursa it is acute. The x rays may give help by showing signs of disease of the bones in cases of arthritis. Dr. Codman believes that when the joint is diseased the bursa is nearly always involved but that the converse is not true. The treatment of acute bursitis is rest in a special form of splint which allows the arm to be held at right angles to the body in internal rotation and abduction. A substitute is to seat the patient at a table and let him rest his arm on a pillow. Dr. Codman condemns the use of a sling. As soon as the pain will allow it gentle passive motion should be begun to prevent the formation of adhesions. The usual treatment of chronic cases in Boston has been passive motions, movements, counter-irritation, and so on, and the breaking down of adhesions under ether. The results have been poor. After rupturing adhesions acute inflammation recurs and the patient hugs his arm in the sling position. It occurred to Dr. Codman not to allow the two raw surfaces to remain in apposition after the rupture of the adhesions but to separate them as far as possible so that each would be opposite a healthy serous surface. This can be done by using the splint mentioned above. The splint is removed daily for exercise. After a week the splint is worn for only an hour daily and the patient should pass his arm through the full range of motion. In severe cases Dr. Codman feared that manipulation under ether would rupture the contracted subscapularis muscle, and he therefore made an incision into the bursa through the deltoid muscle and broke down the adhesions with his finger. In two cases it was necessary to use scissors. Dr. Codman suggests that stiffness of other joints may be due to bursal adhesions.

THE annual dinner of the Fellows of the Royal College of Surgeons of England, held on the occasion of the Council election, will take place at 8 P.M. in the library of the College on Thursday next, July 5th. Fellows intending to be present who have not yet sent in their names are requested to do so at once to the honorary secretaries of the dinner committee at the College, in order to facilitate the necessary arrangements as to numbers.

THE Department of Public Health of Queensland in its Plague Bulletin, No. 10, states that during the week ending May 19th 2 new cases were reported; one of these occurred in Brisbane and proved fatal, while the other occurred in Rockhampton and was of a mild type. In Rockhampton 5 patients remained under treatment but not any in Brisbane. In Hong-Kong during the week ended June 23rd there were 34 cases of plague and 31 deaths reported.

THE medical profession will regret to learn of the death of John Henry Bridges, M.B. Oxon., F.R.C.P. Lond., who died at Tunbridge Wells on June 15th. Dr. Bridges was a medical inspector of the Local Government Board from 1869 to 1892. Outside his professional work he was well known as a prominent English exponent of the positive philosophy originated by Comte.

THE Newton Abbot urban district council has decided to erect a crematorium in the new cemetery which it proposes to provide.

ARMY MEDICAL DEPARTMENT REPORT FOR 1904.[1]

IF the reader will turn to THE LANCET of June 16th, p. 1723, he will see that under the head of "Parliamentary Intelligence" we have already, although very briefly, referred to, and reproduced some general statistical data from, this report which was issued as a Blue-book on June 12th.

It now remains to deal with it more at length and in a manner which better accords with its importance and merits. To begin with, the Army Medical Department volume opens with a covering letter from Surgeon-General A. H. Keogh, Director-General of the Army Medical Service, to the Secretary of the Army Council, submitting the "Report on the Health and Sanitary Condition of the Army for the year 1904." In such a voluminous report as that before us it would be impossible to do more than to select and to touch upon a few of the more salient points out of the many which present themselves for notice. The average strength of European troops serving at home and abroad in 1904 was 244,425 warrant officers, non-commissioned officers, and men. The admissions represent a ratio of 653·1 per 1000 of strength, and the deaths one of 6·19 per 1000, on a strength of 257,079, which includes detached men not shown in the ordinary returns. It is satisfactory to find that these rates show a decrease on those of 1903 and as compared with the corresponding ratio for the decennial period from 1894 to 1903. Amid the sundry and manifold changes in the political world there is always one question confronting successive Governments—namely, how to obtain the number and quality of recruits required for the army in order to avoid the adoption of the continental system of conscription? It is not very reassuring to turn to the results recorded in the present report. The number of recruits inspected during the year was 70,346. Of these 23,790, or 338·19 per 1000, were rejected on medical grounds as unfit, and 46,556, or 661·81 per 1000, passed fit for the service. 992 of the latter were, however, subsequently discharged as unfit for service within three months of enlistment, thus making the total number of rejections equal to 24,782, or a ratio of 352·29 per 1000. We are not told how far the increasing rate of rejections of late is attributable to any increased stringency of the medical tests, but we strongly suspect that owing to a distaste or disinclination for army life on the part of the general population it fails to attract the right sort of men rather than that the number of these rejections is to be taken as the measure of any alleged physical degeneration of the race. The section of the report devoted to recruiting as usual goes into a number of curious details, some of them of an interesting nature, and the tables setting forth the causes of rejection and various other points are well worth glancing at.

In the Malta command (excluding Crete) we notice that enteric fever caused 79 admissions and 16 deaths. Malta fever caused 320 admissions and 12 deaths amongst the men, and 100 of the cases had to be invalided; 25 cases with two deaths occurred among the officers, and 14 were invalided; while there were 70 cases among the women with five deaths, and 39 cases among the children. Owing to the common prevalence of the disease among the naval and military forces, as well as amongst the civil population of Malta, it will be remembered that a Commission was appointed to investigate the life history of the micrococcus Melitensis and the etiological causes of the disease.

Enteric fever was again very prevalent in Bermuda in 1904.

In the South African command, with an average strength of 21,257, the admission-, death-, and constantly sick-rates were 586·6, 9·50, and 41·97 per 1000 respectively and in each instance show a decrease as compared with the corresponding rates in 1903. The chief causes of death were enteric fever (100), pneumonia (27), injuries, and digestive diseases.

Passing on to India, we find that the average strength of

[1] Army Medical Department Report for the Year 1904, with Appendix. Vol. xlvi. London: Printed for H.M. Stationery Office by Harrison and Sons, St. Martin's-lane, Printers in Ordinary to His Majesty. 1906. Price 2s. 6d. Pp. 582.

European troops serving in that country in 1904 was 70,413. The death-rate for that year was 11·28 per 1000. It is very satisfactory to learn that the health of the troops was exceptionally good, the admission-rate being lower than that for any of the 23 preceding years.

There was a decrease in the admission-, mortality-, and constantly sick-rates, with an increase in the invaliding-rate. The chief causes of sickness as usual were malarial fevers and venereal diseases, which together caused 41·12 per cent. of the admissions for all diseases. There was a fractional increase in the admission and constantly sick ratios for enteric fever, the death-rate, however, showing a decrease as compared with the preceding year. Following the practice commenced in 1898 the various sources of infection and possible factors by which enteric fever spreads throughout cantonments in India are discussed at length and an account is also given of the prophylactic or preventive measures undertaken in the several stations. Cholera was responsible for 16 cases with 11 deaths, as against 79 cases with 56 deaths in 1903. 12 of the cases with six deaths occurred at Poona. There were only two admissions for plague; both patients recovered. Dysentery caused 873 admissions and 29 deaths as compared with 1133 admissions and 42 deaths in 1903. In connexion with this disease and abscess of the liver we may parenthetically refer to a table and some remarks at p. 284 showing the results of a comparison between the British and native troops at Barrackpore.

There has been a gradual fall in the admission ratio for malarial fevers since 1901, during which period it has been reduced by nearly one half. A vigorous anti-malarial campaign is being carried out at all stations in India with a varying but, on the whole, encouraging measure of success. The subject of malarial fevers in India is fully discussed on pp. 284–306 of the report.

The section which deals with the health of the British troops serving in India occupies over 100 pages and everything connected with the nature, causes, and prevalence of enteric fever is exhaustively discussed with an elaboration of detail that leaves but little to be desired. The number and variety of the points taken up make it useful for reading and reference. Enteric fever caused over one-third of the deaths from all causes in the command.

The general consensus of opinion among the officers of the Royal Army Medical Corps serving in India is every year coming more strongly round to the view that, whatever may be the originating cause of an outbreak of enteric fever, the cause, that is, of the first case, or group of cases, the continuance of the disease in epidemic form is due in almost all cases to local infection and in the majority of cases to latrine infection. This attitude has been gradually forced on them by the constantly accumulating proof that whatever care be taken to protect the water and food supplies of the men, a care which has been so conspicuously successful in eliminating the yearly menace of cholera which hung over every station 15 years ago, no effect at all is produced by these measures on the spread of enteric fever once it has gained a footing in barracks.

As bearing upon a recent discussion in the House of Commons on barracks and barrack accommodation in the United Kingdom we referred to the section comprising the sanitary reports and notes thereon. Many of the barrack buildings are very old. The cavalry barracks at Norwich are, we are told, 115 years old and several in the southern and other districts date from the eighteenth century. There is much useful information to be gleaned from some of these sanitary reports—in the notes on the Salisbury Plain district, to take one for example. Speaking generally, the army barracks and hospitals which have been erected of late years have been excellent and show good value for the money laid out on them. If the true lesson of the late war be what the Elgin Commission emphatically declares it to have been—namely, that no military system could be considered satisfactory which did not contain powers of expansion outside the limit of the regular forces of the Crown—it opens out a big question. It is possible that we may then have a large supplementary force of what may be styled soldiers by the day who live and sleep in their homes, going out from them on a daily wage for army training purposes.

But to bring our notice to a close, we may say that the *Journal of the Royal Army Medical Corps* seems to have taken the place of what used to be the appendix to these Army Medical Reports. The report now before us contains as usual numerous statistical tables and charts and, in addition on this occasion, a very useful and much-needed "Index to Appendices of the A.M.D. Reports from 1859 to 1901."

CHELTENHAM AS A SPA.

A VIGOROUS endeavour is now being made to reinstate Cheltenham in the position which it formerly held as one of the leading spas not only in this country but in Europe. The composition of its waters fully justifies this effort and the beauty of the town and its surroundings should help to attract a large number of visitors. In 1788 George III., by the advice of his physician, Sir George Baker, visited the town for the purpose of taking a course of the waters and subsequently to this Royal patronage the town enjoyed much popularity for over 40 years. As a proof of the rapidity with which the town sprang into prominence it is to be noted that whilst in 1801 the population was 3076, in 1821 it had increased to 13,400 and in the year 1800 there were over 2000 visitors to the town. Since that time other watering places have been established, especially abroad, which, combining as they do the novelty of travel with the brighter and freer habits and customs of the people with the advantages of spa treatment, have for the time out-distanced similar resorts in this country. It is questionable, however, whether the waters obtained abroad are any better than, if as good as, those to be found in Cheltenham.

Although there are several springs in Cheltenham from which natural mineral waters can be procured at present it is proposed to make use of only two of them at the new Central Spa, which was inaugurated on Wednesday, June 20th, but the other waters can be procured if desired. Analyses of the various waters were made by Professor Thorpe in 1893 and it is on his report that the following remarks are founded. One of the waters to be obtained at the new Central Spa is derived from "Chadnor Villa Well" and is now known as the "Cheltenham Magnesia Water"; the principal ingredient is sulphate of magnesium, this salt being present to the amount of 117·659 grains per gallon; calcium sulphate is also found in the proportion of 63·46 grains per gallon, calcium carbonate 36·372 grains per gallon, sodium sulphate 60·893 grains per gallon, and sodium chloride 27·980 grains per gallon. This water evidently possesses some slight purgative qualities, the chemical combination being an advantageous one. Further use is made of this water by evaporating it to about one-fifteenth of its bulk and bottling it. This is known as the "Cheltenham Natural Aperient" and would seem to possess the same qualities as the natural Hungarian waters. The other water which it is proposed to employ at the spa is obtained from "Pitville Well No. II." and is now known as the "Cheltenham Alkaline Water." Its chief constituents are: sodium chloride 310·985 grains per gallon, sodium sulphate 148·435 grains per gallon, and sodium bicarbonate 29·498 grains per gallon, thus forming a good "muriated water." It is interesting to note that this analysis closely corresponds with that made in 1847 by Messrs. Abel and Rowney, thus proving the constant composition of the waters.

The first water named above would be placed under the heading of sulphated or bitter waters. In moderate doses these waters stimulate the mucous membrane of the digestive tract and at the same time increase peristaltic action. They will therefore be found useful in habitual constipation, with sluggish circulation in the portal vein and its branches, so preventing hepatic congestion and its consequences. They are also indicated in the treatment of obesity in combination with the necessary dieting. The alkaline water probably depends for its action mainly on the sodium chloride which it contains, although the other ingredients may also assist in the beneficial effects produced. Owing to the ready diffusibility of the salt a large portion of it is at once absorbed by the stomach, whilst some of it passes into the intestine. Its therapeutic action is to stimulate the production of the juices of the stomach and intestine and to assist the peristaltic action of the bowels. Sir Hermann Weber suggests that it acts specially on the mucous membrane of the digestive tract, rendering the secretions less viscid. The employment of this water is therefore indicated in dyspepsia and other digestive irregularities, especially when constipation and a tendency to stagnation in the branches of the portal vein exist. Muriated waters have also been found to be serviceable in catarrh of the respiratory organs, expectoration being promoted and the secretion rendered

less viscid. There is another large class of cases in which a course of Cheltenham waters should be found to yield excellent results. Dr. J. F. Goodhart, in his speech at the opening ceremony, in happily expressed language referred to such individuals as sound persons who are out of health. As age advances arterial tension gradually rises, bringing certain symptoms in its train. For the proper regulation of this tension a course of treatment at Cheltenham should prove of great value.

Possessing such waters as the above there is no reason why Cheltenham should not take a prominent place amongst the spas of Europe. There is unfortunately a tendency amongst English people requiring hydro-therapeutic treatment to wish "to go abroad" and to undertake a "cure" at a continental resort—to forsake the Abana and Pharpar of their own country to bathe in or to drink the waters of the modern "Israel" at Homburg, Carlsbad, Marienbad, Aix, or elsewhere. There is no sound reason for this exodus. Amongst the various English spas a large variety of natural waters are to be found where the results of treatment may be equally as good as those obtained "abroad." Certain essential points must be attended to, however, if the English spas are to compete successfully with their continental rivals. Water of a certain chemical composition is not the only requisite—a regular *régime* must be enforced. English physicians are certainly as capable of insisting on the observance of "physiological righteousness" as those in Germany, Austria, or France. There is one matter, however, in which those responsible for the management of most English spas fail, and that is that the whole life of the patients at the spa is rendered too dull. There is nothing for the visitors "to do." Concerts may be given but the audience sit in rows as if they were at church. Laughter and cheeriness are frowned at and the "sadness" with which, according to our continental neighbours, the English take their pleasure is only too noticeable. The Cheltenham corporation seems to be aware of this defect and has made every preparation for the entertainment of the visitors. A magnificent town-hall has been erected in which the new "Central Spa" is placed. Here is to be found a beautiful suite of assembly rooms in which visitors may collect and "take the waters" in bad weather. Frequent concerts will be given and judging by the opening ceremony there need be no complaint of too serious entertainments. In addition, the neighbouring "Winter Garden" affords ample scope for entertainments of all kinds.

We have already referred to the beauty of Cheltenham and its surroundings; the town itself is said to be relaxing at certain times of the year. However that may be, the bracing air of the neighbouring hills amply atones for any such climatic deficiency. An electric tram starts from the centre of the town and runs up to Cleve Hill, whence magnificent views may be obtained of the surrounding country and all the benefits of the cool air enjoyed. Here, too, is an excellent golf course which should certainly prove an adjunct to the spa treatment. It is to be hoped that Cheltenham, possessing all the necessary requirements, may now regain its proper place amongst European spas.

Tuesday and Wednesday, June 19th and 20th, were appointed for the inauguration of the new Central Spa. On Tuesday evening a dinner was given at the Queen's Hotel, the Medical Committee and the Chamber of Commerce entertaining such of the visitors from a distance as were able to be thus early in Cheltenham. These included Mr. W. Armstrong (Buxton), Dr. S. P. Sunderland (Secretary of the Balneological Society), Dr. A. Foxwell (Birmingham), Dr. D. B. Lees (London), Dr. James Swain (Bristol), Mr. C. F. Cuthbert (Gloucester); and as representatives of the medical press, Dr. F. J. Wethered (THE LANCET), Mr. L. E. Oresny (*British Medical Journal*), Dr. StClair Thomson (*Practitioner*), Dr. Leonard L. B. Williams (*Balneological Journal*), and Mr. J. Harris Stone (*Health Resort*). Members of the general press were also present.

Mr. J. T. AGG-GARDNER (President of the Chamber of Commerce), who presided, was supported by the Mayor (Alderman Skilliconne), Dr. R Kirkland, Councillor Stroud, and a large number of the local medical practitioners.

The PRESIDENT gave the loyal toast and then Mr. E. B. WETHERED proposed the toast of "The Visitors." He remarked that among the visitors that evening they especially welcomed members of the press. The community was indebted to the press for information from all parts of the world, including Chicago and the tinned meat industry. He then gave a short account of the origin of the Cheltenham waters and commented on the many attractions, scenic and archæological, of the neighbourhood.

Dr. F. J. WETHERED replied for the medical press. After a brief allusion to the exposure of the Chicago packers in THE LANCET 18 months ago, he said that in order that a spa might be successful certain requirements must be fulfilled, the chief of which were three in number—water of the proper chemical composition, the enforcement of a suitable *régime* by competent physicians, and the arrangement of the social life of the spa by a strong committee in such a manner as constantly to entertain the visitors. He believed that Cheltenham was fortunate in possessing all these requirements in a most satisfactory degree.

Mr. ALLUM (of the *Standard*) also responded, pleasantly bantering the town for its modesty in refraining from more directly challenging competition with its pushful rivals.

Mr. ARMSTRONG (Buxton) proposed the toast "Success to the Cheltenham Spa." He said that on reading the analyses of its waters he had often thought how much Cheltenham seemed to lag behind in turning its great natural advantages to so little account. Were there mineral springs of similar constituents in Germany they would be resorted to by thousands of drinkers every year. For many years there had been a great want of a "drinking cure" in this country and valuable as were Harrogate, Llandrindod, Buxton, and other spas he was perfectly sure that for certain disorders there were no waters in England to take the place that Cheltenham could fill. The town had taken the psychological moment for revival, for this was surely the day of appendicitis, colitis, auto-intoxication—which sounded convivial but was not—to say nothing of gall-stones, liver troubles, and the atonic stomach, brought, like the tinned meat, from America. He congratulated Cheltenham therefore on the timeliness of its efforts as well as on the conditions under which this forward movement was being made.

The MAYOR, in the course of his response, remarked that as a member of the corporation of 20 years' standing he had never known the prospects of Cheltenham waters so rosy as at present and he trusted that from that night the town would go forward and take its proper place among the health resorts of Europe.

Dr. KIRKLAND, whose name was also coupled with the toast, quoted the opinion of Sir Hermann Weber to the effect that the three best-known muriated sulphate waters were those of St. Brides-les-Bains, Cheltenham, and St. Gervais, and declared that those of Cheltenham were not one whit inferior to those of any of the German spas.

The health of the chairman was proposed by Mr. G. A. CARDEW.

Vocal and instrumental music added to the enjoyment of the evening.

The inaugural ceremony took place in the town hall on June 20th, and the large number of people who assembled in the beautiful central hall bore witness to the interest taken in the proceedings. The chair was occupied by the MAYOR who briefly reviewed the history of the Cheltenham waters and sketched the recent efforts which had culminated in the present Central Spa.

Dr. E. T. WILSON said that the present gathering reminded him of Kingsley's title to his book on the West Indies, "At Last." He thought that the Central Spa might be regarded as an earnest of what they were going to do.

Dr. GOODHART then delivered a most interesting and suggestive address on "How Shall we Drink." He said that it was not clear how or why the Cheltenham waters fell out of repute. He had several times spoken to some of the residents upon their remissness in allowing such a talent as their mineral springs to lie unproductive. He had generally been met with the reply that Cheltenham had become a large residential town and a great educational centre, and he had been left to infer that—well, that a large influx of ne'er-do-wells (alluding, of course, only to health) would interfere with the peaceful serenity of its life. But if that was the sole reason, then looking at the matter from an impersonal standpoint, the town stood convicted (he was sure unwittingly) of having shed the half of the moral side of its life. To allow the mineral waters to pass into oblivion was for Cheltenham to shed half its religion. The waters of Cheltenham approached in composition those of Carlsbad and others abroad which had attained world-wide renown; there was no reason, so far as he knew, why the waters of Cheltenham should not be equally efficacious as those spas, if people would but come, and it was clearly to the interest of th town to make them accessible and even perhaps to a i

abroad their virtues. Dr. Goodhart then spoke of mineral waters in general and suggested that the waters were more efficacious when taken at their sources than when sold in bottles. Probably in some measure the composition of the water altered by keeping. He then referred to the influence of climatic surroundings and remarked on the natural advantages of Cheltenham in these respects. He thought that of all the towns of England which he had visited it approached nearest of any in its resemblance to a foreign spa.

Dr. G. B. FERGUSON moved a vote of thanks to Dr. Goodhart for his address and said that it was the duty of his hearers to do all they could to further the use of the Cheltenham waters and to extend a knowledge of their healing properties.

Mr. ARMSTRONG commented on the inexplicable disuse into which the Cheltenham waters had fallen. He spoke of the many advantages and beauties of the town and referring to the Winter Garden said that it was full of great possibilities.

Mr. AGG-GARDNER proposed, and Mr. G. DIMMER seconded, a vote of thanks to the Mayor and to Mr. Armstrong which was carried by acclamation.

MEDICINE AND THE LAW.

The Giving of False Information to a Registrar of Births and Deaths.

OWING to information afforded by the Medical Defence Union two women, mother and daughter, were prosecuted at Kingston recently by the Registrar-General on the charge of giving false information when registering the birth, and subsequently the death, of the illegitimate child of one of them. The serious nature of the accusation arose from the fact that the name of the father, forming part of the necessary information, had been given as Sully, the name of a well-known medical man practising in the neighbourhood, Mr. Albert Max Sully, and the child had been described as Arthur Albert Max Sully. The mother had described herself as Alice Sully, formerly Wray. As a matter of fact, she appears to have been unmarried and to have said in her defence that she had not accused Mr. Sully of being the child's father, but that the father was a person named Sully whose whereabouts she did not know. Mr. Sully gave evidence that in 1902 he had refused to attend this woman any more and that since then he had not spoken either to her or to her mother. He had, however, in that year obtained a signed statement from them retracting and apologising for stories which they had circulated about him in the neighbourhood. In fining the prisoners £2 each with the alternative of 21 days' imprisonment the chairman of the bench spoke of the satisfaction of the magistrates that Mr. Sully had had an opportunity of which he had availed himself of completely clearing his character; he intimated that the light penalty named was due to the magistrates thinking that the two defendants had been guilty of an "error of judgment" rather than of a "deliberate crime." An error of judgment seems a mild term to use in such a connexion and the falsification of the records kept by registrars of births, deaths, and marriages by giving untrue information will seem to many an offence in itself of some seriousness, apart from other considerations, and one, moreover, which is hardly to be committed except "deliberately." It is to be hoped, however, that Mr. Sully and the Medical Defence Union together will have secured the protection of that gentleman from the repetition of such a monstrous and insidious attack.

The Presumption of Dead-birth.

At the Hackney coroner's court on June 20th Dr. W. Wynn Westcott held inquests upon the bodies of two newly-born female children which had been thrown away by persons unknown. Together the cases illustrated the extent to which the presumption obtains that a child who is found dead must be taken never to have lived unless definite facts indicating that there was life after the birth of the child are forthcoming. The first child was found in the River Lea within a sack which had previously contained crystallised sugar. The body was in such an advanced state of decomposition that the police surgeon who gave evidence affirmed that a post-mortem examination would not aid him in giving his opinion as to the time and cause of death. Dr. Westcott, having directed the jury that they might return a verdict that "the cause of the child's death was unknown," advised them, in the entire absence of evidence that the recently born child had survived birth, that they should return a verdict to the effect that the child was "stillborn." The jury adopted the latter alternative. The second body was found wrapped in a chemise cast away on to a waste piece of land; decomposition had not commenced to set in and the after-birth was attached by a long umbilical cord. The police surgeon stated that there were no wounds upon the corpse but that on the left side of the neck there were some marks, possibly caused by the friction of the long cord before or during birth. There were definite signs that breathing had been established but how or why it had ceased he could not say. The jury decided that this child was born alive and that it had died from a want of proper attention at birth.

Lodging-house Keepers and Infectious Diseases.

A claim brought by a young lady musician against a lodging-house keeper at Scarborough to recover her luggage was met recently by a counter-claim of a very unreasonable character, which fortunately was not allowed to succeed. The plaintiff took rooms with a view to occupy them during an engagement at a local place of entertainment and three days afterwards learnt that there was a case of measles in the house, when she naturally left at once. The landlady, however, refused to give up her lodger's boxes and when the latter brought her action to recover them counter-claimed for payment for the lodgings in lieu of notice. His honour Judge Raikes made short work of the landlady's case, pointing out that a common misfortune had put an end to the contract, a misfortune of which lodging-house keepers must run the risk and of which they must take the consequences when it occurred. In other words, an event beyond the control of the parties had made it impossible for the lodging-house keeper to carry out her bargain by supplying a lodging of such a character as the plaintiff must be taken to have bargained for and the plaintiff could not be made to pay for one which might render her liable to the infection of measles. The judgment was for £4, to be reduced to 1*s.* on the return of the box, and for 8*s.* 8*d.* due in respect of the accommodation which the plaintiff actually enjoyed, the costs in each instance to follow the judgment.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8854 births and 4015 deaths were registered during the week ending June 23rd. The annual rate of mortality in these towns, which had steadily declined in the nine preceding weeks from 17·3 to 12·9 per 1000, rose again slightly last week to 13·2. During the first 12 weeks of the current quarter the death-rate in these towns averaged only 15·1 per 1000; in London the mean rate during the same period did not exceed the same exceptionally low rate. The lowest death-rates during last week in the 76 towns were 5·7 in Handsworth and Leyton, 6·5 in Smethwick, and 6·9 in Willesden, all distinctly suburban towns; the rates in the other towns ranged upwards to 18·1 in Warrington, 18·2 in Middlesbrough, 18·3 in Bradford, 19·5 in Merthyr Tydfil, 19·8 in Burnley, and 22·8 in Hanley. The 4015 deaths in the 76 towns showed an increase of 91 upon the low number returned in the previous week, and included 380 which were referred to the principal epidemic diseases, against 375 and 370 in the two preceding weeks; of these, 144 resulted from measles, 79 from whooping-cough, 66 from diarrhœa, 40 from diphtheria, 32 from scarlet fever, 19 from "fever" (principally enteric), and not one from small-pox. The deaths from these epidemic diseases were equal to an annual rate of 1·3 per 1000 in the 76 towns and to the same rate in London. No death from any of these epidemic diseases was registered last week in Cardiff, Plymouth, Devonport, St. Helens, or in seven other smaller towns, whereas they caused death-rates exceeding 2·5 per 1000 in Manchester, Salford, Halifax, Burnley, West Bromwich, Merthyr Tydfil, and Great Yarmouth. The highest death-rates from measles occurred in Manchester, Salford, Halifax, and Burnley; from whooping-cough in Tottenham, Coventry, and West Bromwich; and from diarrhœa in Walthamstow, Merthyr Tydfil,

and Great Yarmouth. The fatal cases of diphtheria showed the largest proportional excess in Hornsey and Wolverhampton; and scarlet fever caused three deaths both in Sheffield and Liverpool. The 19 deaths from "fever" showed no marked excess but included two in Portsmouth. The 13 cases of small-pox under treatment in the Metropolitan Asylums hospitals at the end of last week showed a distinct increase, seven new cases having been admitted during the week. The number of scarlet fever cases under treatment in these hospitals and in the London Fever Hospital on Saturday, June 23rd, was 2692, showing a further increase of 15 upon recent weekly numbers; the new cases admitted during the week were 380, against 312, 344, and 355 in the three preceding weeks. The deaths referred in London to pneumonia and other diseases of the respiratory organs, which had steadily declined in the nine preceding weeks from 399 to 142, further fell last week to 137 and were 18 below the corrected average for the corresponding week in the four preceding years 1902–05. The causes of 47, or 1·2 per cent., of the deaths registered in the 76 towns during the week were not certified either by a registered medical practitioner or by a coroner; in London the cause of only one of the 1205 deaths were not duly certified. All the causes of death was duly certified in 54 of the 76 towns, including Portsmouth, Plymouth, Nottingham, Salford, Bradford, Cardiff, and Newcastle-upon-Tyne. The proportion of uncertified deaths showed, however, a marked excess in Liverpool, Blackburn, Preston, Leicester, Gateshead, and Norwich.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been equal to 15·6 and 15·8 per 1000 in the two preceding weeks, further rose last week to 16·0, and exceeded by 2·8 the mean rate during the same week in the 76 large English towns. The rates in the eight Scotch towns ranged from 9·5 and 10·2 in Leith and Paisley to 17·1 in Glasgow and 19·6 both in Dundee and Perth. The 547 deaths in the eight towns showed a further increase of five upon the numbers in the two previous weeks, and included 25 which were referred to diarrhœa, 15 to whooping-cough, 14 to measles, 12 to "fever," two to diphtheria, one to scarlet fever, and not one to small-pox. In all, 69 deaths resulted from these principal epidemic diseases, showing an increase of 11 upon the number in the previous week; they were equal to an annual rate of 2·0 per 1000, which was 0·7 above the mean rate during the week from the same diseases in the 76 English towns. The 25 deaths attributed to diarrhœa in the Scotch towns showed a considerable increase and included 12 in Glasgow, four in Edinburgh, and three in Dundee. Of the 15 fatal cases of whooping-cough ten occurred in Glasgow and two in Aberdeen; and of the 14 deaths from measles nine occurred in Glasgow and five in Edinburgh. The 12 deaths referred to "fever" showed a marked increase upon recent weekly numbers and included 11 in Glasgow, of which eight were fatal cases of cerebro-spinal fever. It is noteworthy that no fewer than 18 deaths have been referred to cerebro-spinal fever in Glasgow since the middle of May. The deaths in the eight towns referred to diseases of the respiratory organs, including pneumonia, which had been 95 and 80 in the two previous weeks, further declined last week to 69, and were five below the number returned in the corresponding week of last year. The causes of 13, or 3·3 per cent., of the deaths registered in the eight towns last week were not certified, the proportion of uncertified deaths in the 76 large English towns during the same week being only 1·2 per cent.

HEALTH OF DUBLIN.

The annual death-rate in Dublin, which had declined in the four preceding weeks from 22·4 to 16·4 per 1000, rose again to 20·2 in the week ending June 23rd. During the first 12 weeks of the current quarter the death-rate in the city averaged 21·8 per 1000, against 15·1 in London and 17·3 in Edinburgh. The 147 deaths of Dublin residents during the week under notice showed an increase of 28 upon the exceptionally low number in the previous week, and included three which were referred to the principal epidemic diseases, against two and seven in the two preceding weeks. Of these three deaths two were fatal cases of whooping-cough and one of diphtheria, no death being referred to small-pox, measles, scarlet fever, diarrhœa, or "fever." These three deaths from infectious diseases were equal to an annual rate of but 0·4 per 1000, the rate from the same diseases last week being 1·3 in London and 1·8 in Edinburgh. The 147 deaths in Dublin included 27 of infants under one year of age and 35 of persons aged upwards of 60 years; the deaths of infants exceeded, and those of elderly persons were below, the numbers in the previous week. Eight inquest cases and three deaths from violence were registered, and 62, or 42 per cent., of the deaths in the city occurred in public institutions. The causes of nine, or 6·0 per cent., of the 147 deaths were not certified by a registered medical practitioner or by a coroner, the proportion of uncertified deaths being but 0·0 per cent. in London and 7·8 in Edinburgh.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeon E. R. D. Fasken to the *Implacable*, on recommissioning. Staff Surgeons: F. D. Lumley to the *Nile*, on recommissioning; H. H. Gill to the *Highflyer*; W. E. Marshall to the *Andromeda*, on recommissioning; and E. T. P. Eames to the *Donegal*, on commissioning. Surgeons: A. T. Gailleton to the *Implacable*, on recommissioning, and G. Ross to Chatham Hospital.

ROYAL ARMY MEDICAL CORPS.

Captain W. J. P. Adye-Curran, Captain G. J. S. Archer Captain E. W. Siberry and Captain E. McDonnell are selected to attend a course of study at the Royal Army Medical College. Lieutenant-Colonel C. G. D. Mosse, from Winchester, has left for Jamaica. Captain J. M. Cuthbert assumes charge of the military hospital, Stirling, during the absence on leave of Lieutenant-Colonel F. J. Greig, retired pay.

INDIAN MEDICAL SERVICE.

The King has approved of the following admission to the Indian Medical Service made by the Government of India:—To be Lieutenant: Cadwallader Edward Palmer (dated Sept. 1st, 1905).

His Majesty has also approved of the retirement from the Service of the undermentioned officers:—Colonel Andrew Francis Dobson (dated May 28th, 1906), Colonel Thomas Stephenson Weir (dated July 10th, 1905), and Lieutenant-Colonel John Maitland (dated April 1st, 1906).

ROYAL ARMY MEDICAL CORPS (MILITIA).

The appointment to a Lieutenancy of Robert Johnstone Stirling bears date April 1st, 1906.

THE TINNED MEAT SCANDALS AND THE ARMY.

In reply to a question in the House of Commons on June 25th, Mr. T. R. Buchanan, the Financial Secretary to the Army Council, stated that orders had been given to withhold all issue of American canned meat to troops until the officer despatched to inquire into the character of such meat had presented his report.—A board of officers has condemned a quantity of preserved meat which it had been proposed to issue to troops garrisoned at York. It has been decided to supply fresh meat in its place.—A correspondent of the *Tribune* at Malta states that orders have been given that all preserved meat intended for the garrison shall be inspected and reported upon by officers prior to its issue to the men.—The Army Council has called upon the several home commands for returns showing the different brands of preserved meat now in store for the use of troops.

REGIMENTAL HOMES AT BODMIN (CORNWALL).

The regimental homes at Bodmin for disabled soldiers of the Duke of Cornwall's Light Infantry were formally opened by Colonel Borlase Childs on June 20th. The homes, which are two in number, have been erected at a cost of £750. The committee has, after paying for these buildings, a sum of £500 in hand with which it is hoped, if additional subscriptions are received, to erect two more homes. The homes are dedicated to the memory of "Major His Highness Prince Christian Victor of Schleswig-Holstein and men of the regiment who died in South Africa in the Boer War."

METROPOLITAN HOSPITAL SUNDAY FUND.

THE following are some of the principal amounts, additional to those already announced in THE LANCET, received at the Mansion House up to Wednesday evening, when the sum paid in was about £30,000.

	£	s.	d.
St. Paul's, Onslow-square	347	0	0
St. Jude's, South Kensington	345	0	0
Theistic Church, Swallow-street, W. (per Rev. Charles Voysey	325	0	0
St. James's, Piccadilly	314	3	0
Union Chapel, Islington	234	0	0
St. Stephen's, South Dulwich	196	0	0
Holy Trinity, Tulse-hill	186	0	0
Emmanuel Church, Wimbledon	157	0	0
St. Matthew's, Bayswater	145	0	0
Bromley Parish Church and St. Mark's Chapel of Ease	138	0	0
St. Mary's, Stoke Newington, Parish Church and Church of the Redeemer	131	0	0
St. Peter's, Bayswater	131	0	0
St. Stephen's, South Kensington	126	0	0
St. Mary's, Kilburn	123	0	0
St. Mark's, North Audley-street	122	0	0
St. Paul's Presbyterian Church, Westbourne-grove	122	0	0
Temple Church	110	0	0
Grosvenor Chapel, North Audley-street	109	0	0
St. Andrew's, Leytonstone	107	0	0
St. John's, Kidbrook	107	0	0
City Temple	106	0	0
Holy Trinity, Marylebone	103	0	0
St. Mark's, Reigate, and Nutley-lane Church	102	0	0
St. James's, Paddington	100	0	0
Greek Church, Bayswater	90	0	0
St. Mary's, Boltons	83	0	0
St. Thomas's, Portman-square	80	0	0
St. Margaret's, Lee	73	0	0
Church of the Annunciation, Chislehurst	73	0	0
St. Michael's, Blackheath Park	71	0	0
St. George's, Beckenham	68	0	0
Christ Church, Lee	66	0	0
St. John Presbyter, Kensington	65	0	0
Dutch Church, Austin Friars	64	0	0
St. John's, Blackheath	63	0	0
Brixton-hill Wesleyan Circuit	61	0	0
St. John the Evangelist, Putney	60	0	0
Weybridge Parish Church	60	0	0
Christ Church, Brondesbury	59	0	0
St. Gabriel's, Pimlico	58	0	0
Oratory, Kensington	58	0	0
St. Stephen's, Ealing	57	0	0
Lemsford Parish Church	57	0	0
All Saints, Margaret-street	56	0	0
St. John's, Downshire-hill	53	0	0
Hornsey Parish Church	52	0	0
Messrs. Longmans, Green, and Co.	52	0	0
St. Paul's, Camden-square	50	0	0
Dulwich College Chapel	50	0	0
Gray's Inn Chapel	50	0	0
Westminster Congregational Chapel	50	0	0
St. Mary Platstow, Kent	49	0	0
St. Michael's, Highgate	48	0	0
St. Mark's, Marylebone	47	0	0
St. Stephen's, East Putney	47	0	0
Chapel Royal, St. James's	47	0	0
Church of the Immaculate Conception, Farm-street	47	0	0
St. Matthew's, Brixton	46	0	0
St. Magnus Martyr, London Bridge	46	0	0
St. Saviour's, Denmark Park	46	0	0
St. Saviour's, Paddington	45	0	0
St. Luke's, Nightingale-lane	45	0	0
St. Mary Magdalene's, Enfield	44	0	0
St. Germain's, Blackheath	43	0	0
West Wickham Churches	43	0	0
St. Peter's, Streatham	41	0	0
St. Stephen's, Portland Town	41	0	0
Grafton-square Congregational Church, Clapham	41	0	0
St. Saviour's, Brixton hill	40	0	0
St. Stephen's, Westminster	40	0	0
St. Luke's, Nutford-place	39	0	0
Ewell Parish Church	39	0	0
St. Matthias's, Earl's Court	38	0	0
Blackheath Wesleyan Church	38	0	0
All Saints, Orpington, and Church of Ease	38	0	0
Ascension Church, Blackheath	37	0	0
St. Saviour's Cathedral Church	36	0	0
Christ Church, Beckenham	36	0	0
St. Alban's, Holborn	35	0	0
Ilford Parish Church	35	0	0
St. Olave's, Woodberry Down	34	0	0
St. Mary's, West Kensington	34	0	0
St. Mary's, Paddington	34	0	0
Central-hill Baptist Church, Upper Norwood	33	0	0
St. Andrew's, Totteridge	32	0	0
St. Mary's, Putney	32	0	0
Christ Church, Woburn-square	32	0	0
St. Mary Virgin, Primrose-hill	31	0	0
St. Matthew's, Sydenham	31	0	0
Holy Redeemer Mission, Stoke Newington	31	0	0
St. George's, Tufnell Park	30	0	0
St. Luke's, Holloway	30	0	0
St. Thomas's, Telford Park	30	0	0
Mitcham Parish Church	30	0	0

Correspondence.

"Audi alteram partem."

HYGIENIC MEASURES AGAINST SYPHILIS.

To the Editors of THE LANCET.

SIRS,—In Professor Metchnikoff's lecture on this subject at King's College I note three important points—obscured a little by its pervading tone of enthusiasm—from which no romance or glamour of scientific exploration should be permitted to divert attention.

1. The first is his emphatic warning that the demonstration is incomplete. It is not only that the experiments in human prophylaxis have been few but that every one of them is unfinished. The suppression of primary symptoms—which is as far as we have got yet—does not prove immunity from those tertiary disorders which characteristically follow a mild infection, and 15 to 20 years is the *normal* distance between first infection and the onset of (e.g.) general paralysis. Each experiment, therefore, takes fully 20 years to run. It is most important that this fact should be firmly grasped and that we should not let our imaginations run away with us. 2. Again, the very striking instance given by Professor Metchnikoff of the accidental inoculation of a laboratory attendant goes to show that the immunity of the individual—if it be immunity—does not exclude the danger of infection for others. Here a patient in whom Professor Fournier himself could find no trace of syphilis is proved to have been in a state of active contagiosity—a very notable warning as to the distance which still lies between us and any trustworthy prophylaxis by inoculation. 3. Driven back, therefore, for the meantime on purely therapeutic measures, Professor Metchnikoff recommends the immediate use, after a suspected infection, of certain mercurial frictions to prevent the spread of the poison through the system. Here, again, however, the experiment is equally incomplete; and the student who permitted himself to be inoculated with syphilis in order to test the value of the remedy must for 20 years to come be uncertain what the experiment will cost him.

Thus the upshot of the matter is, that while Professor Metchnikoff applies the spur to investigation, he applies the rein to hope. We must be patient. Success, on his own showing, has not yet arrived; it is only discernible on the far horizon. This on the one hand. On the other, how does Professor Metchnikoff conclude his lecture? By calling for the coördination meanwhile of every means of diminishing the scourge—medical, educational, moral, social, administrative? No, but by reiterating the parrot cry that hygiene must be paramount over morality, as if hygiene and morality were antagonistic to each other, a supposition absolutely contradicted by experience. What does he mean by morality? Does he mean the attitude assumed by those people—I do not know where he finds them; not, I think, among those who have given any intelligent thought to the matter—who oppose themselves to any cure for syphilis, however innocent in itself, on the ground that disease is the proper penalty of vice? If this is what he means, it is surely a flagrant misuse of terms. Or does he mean that the combat with disease is to be unflinchingly carried out even by means which involve a definite deterioration of public morality? This is what he appears to mean, and a most dangerous position it is for any hygienist to take up. For the supreme ally of the hygienist in this matter is, precisely, morality, and a rising level of morality, which, by diminishing the area of vice itself, diminishes *pari passu* every difficulty attending the hygienic campaign against the consequences of vice; and every hygienist who casts contempt upon virtue is deliberately adding to the weight and momentum of the forces which are already too strong for him.

I would venture to add a most earnest appeal to the profession generally, and especially to medical officers of health, whose rôle is so eminently practical and who are in continual contact with the masses, not to allow themselves to be befooled in this matter. Venereology is not the whole of hygiene, and hygiene itself is not confined to the material side of things. In a matter affecting so intimately the social and civic life of a people it is of the most vital importance that it should *not* be treated from a purely specialist point of view. The specialist who clears

away every moral consideration from his path clears away his best friends and leaves the road open to his worst enemies. In the conflict with a disease springing so largely out of moral weakness he needs the alliance of every moral force that can touch his problem at its origin. Instead, he has too often relied upon material forces which have only deluded and handicapped him. It is matter for infinite regret, and even anxiety, that the spirit of controversy should even now continue to over-ride that of friendly discussion and common effort. It would be strange indeed if narrow and reactionary ideas were to obtain a new vogue in England at a time when venereologists in Germany are beginning to realise the necessity of a broader outlook and of bringing "regulationists" and "abolitionists" together for the united discussion of a problem which both are anxious to solve.

I am, Sirs, yours faithfully,

B. LEPPINGTON.

Member of the International Prophylactic Society.

June 23rd, 1906.

A DISCLAIMER.

To the Editors of THE LANCET.

SIRS,—Our attention has been directed to an article entitled "Fighting Consumption" in the *Daily Telegraph* of this date. As this has been published entirely without our knowledge, assistance, or consent, and we are specifically mentioned by name therein, we feel it to be our duty to the profession and ourselves emphatically to protest against it.

We are, Sirs, yours faithfully,

JAMES H. SEQUEIRA, M.D. Lond., F.R.C.P. Lond.,
Physician in charge of the Skin Department.

W. BULLOCH, M.D. Aberd.,
Bacteriologist to the Hospital.

G. T. WESTERN, M.B. Cantab.,
Assistant to the Inoculation Department.

London Hospital Medical College, London, E., June 21st, 1906.

THE TREATMENT OF INFANTILE DIARRHŒA.

To the Editors of THE LANCET.

SIRS,—The *raison d'être* of my apparently dogmatic correspondence with you dated June 2nd, p. 1567, was the very bitter experience which I once had when I signed 14 death certificates one morning, the death in every case being due to this terrible complaint. That little experience caused me to take a most exceptional interest in this disease. When I wrote you I had no idea who it was who originated the purgative treatment for this disease but it occurred to me as the line of treatment which ought to be adopted after I had witnessed the results of several investigations into the causation of this complaint. If Dr. Weir wishes "to stop the diarrhœa before it stops the patient" he can very easily do so by injecting atropine sulphate $\frac{1}{100}$ grain to $\frac{1}{150}$ grain, or small doses of codein sulphate, but I think that the sooner the bowel is cleared the better.

The arsenite of copper is not such "a powerful remedy for an infant" as he would imagine; if given in small and oft-repeated dosage it seems to ease the tenesmus and tympanites in a remarkably short time. I do not use stimulants, such as brandy or whisky, in which he places such confidence—a confidence which does not seem to have been shaken by the results of the recent trials in London on the subject of "What is whisky?" "What is brandy?" I must say I prefer strychnine.

I find the hypodermic syringe a most useful adjunct in the treatment of this complaint. It was the "safer and equally efficacious" methods of treatment which produced such deplorable death certification outlined above and caused me to cast aside the *ipse dixit* of some most learned authorities and to worry out each individual case on its own merits. The result of my own method of treatment has been that I lost one case in 1904 and three cases in 1905.

I am, Sirs, yours faithfully,

WILLIAM AYRES.

THE TREATMENT OF RINGWORM.

To the Editors of THE LANCET.

SIRS,—*Apropos* of the leading article in THE LANCET of June 16th under the above heading I should like to point out a method of treatment which I have adopted for many years with unvarying success. I have treated several hundred cases and so far from lasting four years I do not remember a case that has not been cured within four weeks. The remedy which I use is ordinary blistering fluid (liquor epispasticus) and I selected this on account of its penetrating quality and its special action on the hair papilla. One brush over is quite sufficient for a simple case, say of one or two small patches. In chronic cases, where there is exudation or scarring from the use of escharotics, two or sometimes three applications are required at intervals of about a week. I dilute with glycerine when a blister mark is to be avoided or where there is risk of too great absorption of the drug, as in cases where the patches are large and numerous. The remedy is equally efficacious on the scalp and depilation is quite unnecessary. The most important point is to attack the zone of invasion, encroaching slightly upon the healthy tissue beyond.

I am, Sirs, yours faithfully,

THOMAS JACKSON, L.R.C.S. Edin., &c.

Greystoke, Penrith, June 23rd, 1906.

ENUCLEATION OF THE PROSTATE FOR HÆMORRHAGE.

To the Editors of THE LANCET.

SIRS,—My attention has been drawn to a report of the proceedings of the Surgical Section of the Royal Academy of Medicine in Ireland, published in THE LANCET of June 9th, 1906, p. 1610, in which Sir William Thomson, referring to a case in which he had enucleated the prostate for severe hæmorrhage, says: "He believed this was the first time the operation had been reported, as undertaken for hæmorrhage only."

I invite Sir William's attention to a lecture of mine on the subject of enucleation of the prostate published in the *British Medical Journal* of July 4th, 1903, where at p. 4 he will find details of a case (Case 36 in my series), that of a distinguished member of the medical profession, aged 71 years, in which, in consultation with Mr. G. H. Makins of London and Mr. E. White of Putney, I removed the prostate for alarming hæmorrhage which had existed for several weeks and which seriously threatened the patient's life. I am glad to say that this very day this gentleman paid me a friendly visit, in perfect health, and untroubled by any urinary symptoms, more than three years after operation. Amongst the 315 cases of enucleation of the prostate in my practice to date, severe hæmorrhage has been a marked symptom in many instances, and it is that which frequently induces the patient to submit to operation.

I am, Sirs, yours faithfully,

Harley-street, W., June 26th, 1906. P. J. FREYER.

GASTRO-ENTEROSTOMY.

To the Editors of THE LANCET.

SIRS,—In my final reply to Mr. Ward I desire to refer as briefly as possible to a few points only. The use of the clamps is the first of these. When Mr. Ward put forward the claim in his first letter I quoted Kocher and Sir Thomas Smith (not Mr. W. A. Lane, as Mr. Ward says with a gay carelessness that is not confined to dates) and I gave a reference to Doyen's book as the first published account (1895) of his use of the clamps in stomach surgery. Mr. Ward, in his second letter, modified the claim which, in its original form I had shown to be untenable, to a "special application" of the clamps in gastro-enterostomy and I then said Doyen "used and depicted the use of the clamps in the operation of gastro-enterostomy to fulfil the special objects Mr. Ward enumerated." Mr. Ward now tells me he does not find this special use depicted in Doyen's book. It is not there. I did not refer Mr. Ward to Doyen's book for the illustrations of the "special application in gastro-enterostomy," as he will find if he reads my letter attentively. In his book Doyen describes the method of gastro-enterostomy he performed at that time. He then used four clamps, two on the stomach and two on the jejunum (p. 295). For illustrations showing the special use of the clamps Mr. Ward must refer to later papers of Doyen, but as these may not be "easily accessible" copies of the figures will be found in Monprofit's book on "gastro-enterostomy" (p. 106, fig. 111). Doyen was not, of course, the only surgeon to use clamps in the operation of gastro-enterostomy prior to 1900. Guinard

invented a clamp with parallel blades and described and depicted its use in the operation of gastro-enterostomy in 1899.[1] May I point out that some reference to the writings of Doyen and others who invented clamps, especially for use in stomach and intestinal work, would have saved Mr. Ward from the several errors I have had to correct?

Mr. Ward in his second letter gave us what he said was "the precise date" of Mr. Littlewood's adoption of the method of "excision of an ellipse of the mucosa from each viscus" in gastro-enterostomy. I showed that the date he gave was inaccurate. Mr. Ward acknowledges this and now gives the correct date and suggests that it would have been simpler for me to do so. I disagree. Since I have shown, and will demonstrate once again, that the method for which Mr. Ward claimed priority was not performed on either the true or the false date, the mere date is in itself of no consequence. What is vital is Mr. Ward's credibility as a witness; it was only that which I was concerned to illustrate and I neither suggested nor desired that any inference other than one relative to this should be drawn from any statement.

When I obtained access to the record of the case quoted by Mr. Ward in support of the claim to priority in this method of excision of the mucosa, I found, as I have said, that it was expressly stated that the jejunal mucosa was not excised. Mr. Ward now asserts that this is the result of "the dresser's inaccurate statement." The defence, amazing though it is, is worthless. In the notes of the case it is positively said that no jejunal mucosa was removed. These notes have been edited by Mr. Littlewood himself; they bear an alteration, or rather an addition, in his own handwriting, in the brief account of the operation. The description of the operation is illustrated by three figures, in which the fact that no mucous membrane was removed from the bowel is clearly displayed and the legend attached to the drawing repeats the fact. In no less than three places is the statement made and it remains in carefully revised notes uncorrected. It is mere trifling to suggest inaccuracy now. This record was chosen and cited by Mr. Ward himself to establish the claim he put forward. On examining it I found its date incorrectly given and I am now told that the record itself, even after its revision, is inaccurate. The record is true or it is false; if true, it does not support Mr. Ward's claim; if false, why did Mr. Ward quote it in evidence?

Mr. Ward tells me that the operation I practise is that to which he attaches Mr. Littlewood's name. I will endeavour to bear this with fortitude. For I believe it to be true that Mr. Littlewood has never yet performed this operation and I have, I think, given good reason for not accepting Mr. Ward as a sound authority upon matters of surgical procedure.

I am, Sirs, yours faithfully,

Leeds, June 25th, 1906. B. G. A. MOYNIHAN.

AN OBSCURE CASE.

To the Editors of THE LANCET.

SIRS,—The following case struck me as of interest and of importance in dealing with schools or families of children. A school girl, aged ten years, was found to have a rash on May 30th. I saw her on May 31st. The child was quite well, clean tongue, temperature and pulse normal. There was a papular eruption over the chest and back with two or three spots on the face and one or two on the scalp, perhaps 30 papules in all. Some on the chest and back had a tiny red punctate spot in the centre exactly like an insect bite, and of these last two or three had a hæmorrhagic ring round the papule. I could find no sign of a vesicle though I searched carefully on two occasions. Nine days later the child developed a single spot which had all the characters of a chicken-pox vesicle. Nine days after this last occurrence an older sister developed ordinary chicken-pox. Had the first rash any connexion with the chicken-pox, or was its appearance merely a coincidence?

I am, Sirs, yours faithfully,

ETHEL M. N. WILLIAMS, M.D. Lond., D.P.H. Camb.

Newcastle-on-Tyne, June 22nd, 1906.

[1] Traité de Chirurgie, Le Dentu et Delbet. Paris, 1899, vol. vii., p. 446, fig. 27.

LIFE INSURANCE OFFICES AND THEIR MEDICAL REFEREES.

To the Editors of THE LANCET.

SIRS,—Is there a Society of Medical Referees to Insurance Companies or any other society that represents their views to the various rich and influential offices? It is highly desirable, I think, that some uniform system of payment should be adopted for filling up the generally most elaborate forms that are now presented to us when a person comes to be examined as a preliminary to taking out a life policy. Generally speaking, I have noticed that the more recently established and more largely advertised the society the more parsimonious is it in the fees it pays for medical reports, on the accuracy and trustworthiness of which its future usefulness and prosperity largely depend. I inclose for your inspection a form lately submitted to me with a request that I would examine a certain life. At the end of a string of at least 50 questions is an intimation that if the sum assured is under £300 the fee is 10*s.* 6*d.* I wrote to the manager saying that if I made the report my fee would be £1 1*s.* and I received a reply that he had made other arrangements for the examination and would not trouble me further. The work attached to putting such a series of questions and noting the answers alone occupies a large amount of time and it is obvious that supplying a correct answer to many of them necessitates a most careful and skilled examination for which, in my opinion, a fee of at least £1 1*s.* should be paid.

I am aware that some offices now make a feature of granting insurances without a medical examination, as to which we can have no possible grievance, though we may have our own opinion. Within my own somewhat limited experience I have found a patient suffering from carcinoma of the rectum, and yet within a week or two I have been requested to examine him for life assurance, as a proposal for an insurance of £1000 had been made on his life. As this man never showed any obvious constitutional evidence of organic disease for some months and continued his employment considerably over a year afterwards I think an insurance company would have found considerable difficulty in disproving its liability had not the medical referee relieved it of all risk in the matter.

I am not writing in any spirit of antagonism to the life insurance companies, to the usefulness and liberality of many of which we daily testify, but simply to register a mild protest against what I venture to submit is a mistaken and illiberal policy on the part of a few. One cannot help feeling that the accumulated millions of many offices represent a very large amount of highly skilled but ill-requited work on the part of the medical referees.

I am, Sirs, yours faithfully,

June 18th, 1906. REFEREE.

*** The Star Life Assurance Society—for we see no reason for withholding the name of the society in question—puts a low value on medical service. The medical man first is to write down for the candidate for insurance an elaborate statement as to the proposer's age, habits, and previous and family history. Then he is to fill up an enormous confidential report as to the proposer's health. He is to measure him, weigh him, strip him for physical examination, examine him for hernia, test his urine for sugar and albumin, and, in female cases, indicate the presence or absence of symptoms of ovarian or uterine disease. And all for 10*s.* 6*d.* if the sum assured is less than £300. We strongly recommend our readers to follow "Referee's" example and to refuse such fees, even though in some instances other medical men may be found to accept them.—ED. L.

"JACOBEAN" TREATMENT OF THE SICK.

To the Editors of THE LANCET.

SIRS,—The interesting annotation in THE LANCET of June 23rd upon the recent correspondence in the *Yorkshire Post*, in which the Rev. Mr. Saywell (auspicious name, suggestive, Bunyan like) described his experience of the Jacobean treatment as applied by him, "eighteen or twenty years ago," to a Mr. N. who was "given up"

by his doctor and was "*in extremis*" from acute pneumonia, reminds me of a somewhat similar case which occurred in my own practice, but which has hitherto remained unpublished. More than twenty years ago, in fact nearly fifty, I was in a country district in which there was an old woman, known to me only as "Betty," who earned a scanty living by peddling small wares, going errands, executing commissions in the neighbouring market town, and so on. She was an honest and worthy old dame, much liked and respected by her neighbours. I was one day asked to see Betty and was told that she was dying and had been "given up" by the parish doctor, Mr. A., who said that he could do no more for her and that she must "look above." I took a somewhat different view of her condition, and in the course of a few days had the satisfaction of seeing her about again with her basket. I forget the details of my treatment, but it was not "Jacobean." The old woman was duly grateful for her restoration, but was furious with the parish doctor, on account, I believe, of what she considered to be the prematurity of his endeavour to turn her thoughts heavenward. It became a joke among the farmhouses to ask whether she had seen Mr. A. lately. "Seed he!" she would answer, "Noa, nor doant want to. He told me to look abuv." Now if Mr. Saywell had visited poor Betty in my place, and if the *vis medicatrix naturæ* had as large a share in her recovery as I am inclined to attribute to it, he would have been supplied with a case not only parallel to that of "Mr. N.," but even bearing to it, when the age of the patient is considered, the relation described by the Cockney as subsisting between the mule and the donkey. Betty's case would have been like Mr. N.'s, only "more so."

I am, Sirs, yours faithfully,

June 25th, 1906. F.R.C.S.

THE EXHIBITION OF HYGIENE IN VIENNA.

(FROM OUR VIENNA CORRESPONDENT.)

IN the middle of May there was opened in Vienna an exhibition which contains so many items of interest to the medical profession as well as to the general public that it is worth while to describe it in a medical journal. The exhibition is held in the usual place for such undertakings in Vienna—namely, in the building known as the Rotunda, which was erected in 1873 on the occasion of the World's Exposition in honour of the silver wedding of the Emperor Francis Joseph and the Empress Elizabeth. The managing committee has arranged the masses of the various objects in a very convenient way, enabling the visitor to see at a glance in which of the eight divisions they are to be found. Of the committee about one-third are medical men occupying official positions as directors of hospitals, chairmen of sanitary boards, chief officers of health, &c., and the remainder are representatives of the commercial, manufacturing, and wealthy classes. The objects on view in the Rotunda have been classified in eight divisions, three of which are of essentially medical interest. The attention of the visitor is at once attracted by a group of objects sent by the city of Vienna. This exhibit offers a good opportunity of studying the progress of medical work during the last century. Large models of the first general hospital founded by the reigning Emperor in 1792 are here placed in contrast with its successors—namely, (1) the general hospital as it exists to-day and (2) the one in course of construction as it will appear in 1909, when it will be finished. Whilst the first contained 300 beds and covered an area of about 8000 square yards, the last-mentioned one will contain 2400 beds and will cover an area exceeding 200,000 square yards. The new hospital has been planned on the pavilion system, providing for each clinic all necessary accommodation for scientific research, so that each pavilion may be regarded as a special hospital in itself. The models of a new institution for mental diseases and of the lunatic asylum, also built on the principles of isolation and free access of air, complete this group. Methods of disinfection *en masse* are also shown. For this purpose two systems are in use, one employing steam alone and another based on the production of disinfectant gases or vapours, chiefly formaldehyde. For the disinfection of clothing and hospital beds the first system is adopted, whilst the municipal authorities employ the formaldehyde method for disinfection of houses or rooms by means of an apparatus which contains a large lamp and when in use emits a jet of mixed steam and formalin. An extraordinarily fine exhibit is that of the Vienna hospitals. In it a surgical ward and an operating theatre fitted with the latest aseptic appliances are shown, and the children's hospitals have sent representations of their cots and playrooms; the two nurseries—"how they should be" and "how they should not be"—form an interesting group. The first is fitted with white enamelled furniture and has no carpet, whilst the latter, with its dusty carpet, long-haired dolls, and non-washable walls, provides abundant shelter for microbes. The clinics show many kinds of apparatus and very instructive tables of statistics, from which it may be learned that the number of out-patients at the hospitals has exceeded 700,000 in one year, whilst more than 25,000 in-patients occupied the beds of the general hospitals during the same period. Quite a novel feature is the use of casts (*moulages*) in teaching. The word "*moulage*" is applied to the lifelike reproduction of visible pathological conditions of the body in a material resembling wax. These casts are made by Dr. Henning, at once an artist and a medical man, who has brought the preparation of these absolutely lifelike copies of diseased parts to a high degree of perfection. The method comes from France but it has been developed here and as far as the aspect of the diseased part is concerned it fully compensates for the absence of clinical material. Dermatologists, surgeons, and ophthalmologists already make use of it as a means of instruction and some casts of syphilitic roseola and of the eruptions of small-pox and scarlet fever convey even a better idea of the disease than the actual cases themselves. The reproduction can be made from any part of the living body, except, of course, the inside of organs, whilst post mortem everything short of microscopic changes can be reproduced. The collection of Dr. Henning comprises not only clinical specimens but also *moulages* for the use of the Anti-alcohol Society which has its exhibits next to the hospital group. An instructive collection is to be seen there, comprising *moulages* of normal organs and of organs diseased by the action of alcohol, and the changes are quite perceptible even to non-medical eyes. Numerous tables, containing such particulars as the money spent in drink in different countries, the relation between crime and drunkenness, the prevalence of bodily and mental disease in drunkards, and the comparative mortality of abstainers and non-abstainers, complete the admirable and very prettily arranged group.

The group which deals with the rendering of first aid in accidents and in war has a very complete appearance. As regards the latter, there are three different exhibitors who have contributed separate groups. First of all the Ministry of War has placed on view a fully equipped hospital train; the train consists of carriages for the medical attendants and nurses, for kitchen purposes, and for dressing materials; there are also ten carriages, each providing accommodation for 15 or 20 wounded men. Similar facilities for the conveyance of wounded men are exhibited by the Red Cross Society and by the Order of the Knights of Malta; the latter of these two has also erected a field hospital in the form of a tent which is capable of being quickly removed in case of need. Turning to the first-aid institutions, the exhibit of the Vienna Rettungsgesellschaft, or street ambulance corps, the first of its kind in every respect, shows that no efforts are spared in maintaining its high position. This institution, which has served as a model to many similar ones, shows ambulance vehicles of the latest type, fitted with all appliances for rendering help in cases of accident or poisoning, as well as vehicles padded inside for the conveyance of lunatics. For infectious cases there are carriages which can be disinfected by steam. For the relief of the sufferers from a disaster on a great scale, such as an earthquake, an inundation, or a fire, there is a carriage fitted up as a kitchen, capable of preparing food for nearly 1000 persons in less than three hours. A respiration apparatus supplied with compressed air for workers in a foul atmosphere is the latest addition to the stock of life-saving appliances belonging to the corps. The most attractive feature of the exhibition is undoubtedly the rescue chamber of a coal-mine which has been erected by the Ministry of the Interior. The Austrian mining laws require such precautionary measures. A narrow passage, closely imitating its prototype in an

actual coal-pit, leads into a room measuring about three metres by four metres. The walls are extremely thick and strong; there is only one entrance and this can when required be made airtight by means of indiarubber. The room contains three cylinders of compressed oxygen, inhalation apparatus, tinned food, and a box with medicines and surgical first-aid material. The room will serve as a refuge for 24 men; the oxygen will enable them to send out rescue parties and to await the arrival of help from above-ground. The supply of oxygen is 5000 litres which will be sufficient for 30 men for three days. With such precautions a catastrophe similar to that at Courrières would be almost impossible.

Division No. 3 of the exhibits also appeals to the medical visitor. It comprises three collections of objects shown by medical men. The first group consists of illustrations of electro-pathology by Dr. Jellinek, an expert on this not very widely known subject. His specimens, which are partly natural and partly casts, demonstrate the action of the electric current on the human body and on metals and explain why, for instance, a current of 500 volts may kill one man whilst another man can endure shocks with a current four or five times more powerful. The pathological results seen in fatal cases consist in extensive hæmorrhage in the respiratory passages, in punctures of the tissue, and in nervous shock of a depressing character. Sometimes the current or the lightning simply tears off parts of the clothing or the skin without doing further injury. The second group deals with the pathology of the teeth and is exhibited by dentists and the Union of Stomatologists. The phylogenetic development of the teeth, their anatomy, the means of correction of malformation, and methods of preventing caries are demonstrated in a very instructive, simple way, whilst the pathology is explained by fine drawings and specimens. The third group is a small one dealing with miners' diseases; the exhibitor is Dr. Goldmann, who is regarded as an authority on the subject.

Interesting, though somewhat difficult, reading is provided by the tables of the Hilfsverein für Lungenkranke (Society for the Aid of Patients suffering from Pulmonary Diseases). The tables contain statistical data as to the ravages of pulmonary tuberculosis in Austria, the mortality of patients following various occupations, the sanatoriums erected, the results obtained (they are not very bright), and maps referring to the frequency of the disease. Similar tables have been placed in the exhibition by the Educational Department to illustrate the data collected from the examination of school-children as now practised in some parts of the empire. Thus the percentage of diseases of the eye and the ear, the influence of mixed teaching (boys and girls together) in regard to mental capacity, and the hours of work at school and of gymnastics allotted to the different age periods will no doubt be of interest to teachers as well as to medical men.

Finally, the section dealing with food, pure and adulterated, deserves the attention of every visitor. Methods of sterilising milk, of modifying cow's milk for the use of infants, and of distributing it without contamination to the different parts of the country are shown on small models of the whole establishment, which monopolises the milk-supply of the capital. Next to this pleasing group the municipal market board has an exhibit which gives a good insight into the adulterations which are practised. The samples of adulterated or otherwise unwholesome articles to be found here include flour, meat, pastry, canned fruit, tinned preserves, and all kinds of sweetmeats, the latest scientific discoveries being made use of for the purpose of deception.

Of course, the above-mentioned groups do not include all the objects in the exhibition, for my intention is only to give a brief description of such as are most likely to attract the attention of a medical man.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The University.

THE summer term is rapidly nearing its end and the professional examinations have commenced. The third part of the examination for the degrees of M.B. and Ch.B. has been completed and of the candidates who entered six have passed in pathology and bacteriology and five in materia medica and practical pharmacy. The Queen's scholarship was awarded to Mr. J. Dale who took the highest place in the examination. In the dental department Mr. W. Bowater was awarded a first class in the final examination for the degree of B.D.S.

The Hospital Saturday Fund.

The Birmingham Hospital Saturday Fund has been in existence for 34 years and the movement which produces the fund is thoroughly popular and well managed. The fund provides £10,000 a year for the hospitals. It also maintains a surgical aid department and convalescent homes at Great Barr and Llanrhos, which have received over 24,000 patients. The special Saturday set apart this year as Hospital Saturday was June 16th, but whilst a large part of the money collected at the various works is paid into the banking account of the fund on that day a very considerable portion is deposited at later dates. Last year the sum of £18,732 was collected and it was hoped that this year £20,000 would be obtained. Whether that will be the case or not is uncertain. The movement is under absolutely democratic direction and it is obvious that so large a sum, made up as it is of many small sums, cannot be collected and dealt with without a large amount of work. It is not surprising, therefore, that the executive committee finds it necessary to devote two evenings a week to the work throughout the whole year. This is a large demand upon the time of the members of the committee but it is given ungrudgingly in the service of a good cause. Perhaps no one has done more for the movement than Alderman Cook and as this year is the twenty-fifth year that he has presided over the committee it was decided that it was the time to make a special acknowledgment of his services and at the annual meeting he was presented with an album containing a record of the movement in which he has taken so prominent a part during a quarter of a century and photographs of those who have been associated with him. Whether or not the collection will reach the £20,000 desired this year cannot yet be decided but in the early part of the week it was stated that £18,043 had been received and the account was still open.

Lunacy in Birmingham.

It appears from the report of the lunatic asylums committee of visitors that the number of patients in the Birmingham asylums has increased from 1903 to 2029 during the past year and this cannot be considered a very alarming increase. The average death-rate has been slightly higher—10·98 per cent. as contrasted with 10 64 per cent. in the previous year, and the cost per patient has risen from 10*s.* 6½*d.* to 10*s.* 9*d.* The causes, so far as they appear in the report, are much as in preceding years, intemperance being set down as the causative agent in 13·4 per cent. and heredity in 16·8 per cent. Many of the patients admitted at Winson Green have been old, many suffered from bodily ailments, and many were general paralytics. As a result the asylum has been temporarily converted more into an infirmary than an institution for the cure of mental diseases.

Open Spaces and Playgrounds.

Almost simultaneously with the formal opening of the beautiful Warley Woods which have been secured to our city partly by public subscriptions and partly by the wise expenditure sanctioned by the council, a Birmingham Playgrounds, Open Spaces, and Playing Fields Society has been successfully inaugurated. The objects of the society are to provide open spaces and playing fields in the congested areas of Birmingham and the suburbs and to preserve similar spaces in those areas which are not yet fully developed. The meeting at which the society was definitely formed and named was presided over by the Lord Mayor (Councillor A. J. Reynolds) who pointed out that although the objects of the society had his full sympathy and were very laudable the rates of the city were already so high that further expenditure would have to be watched very carefully. Councillor Nettlefold (chairman of the provisional committee) said that he fully recognised that for the present, at all events, it would be necessary for the society to find the whole of the purchase money for any area which it wished to acquire. At the present moment the society wishes to acquire 1000 square yards in the neighbourhood of Tower Hill, which will probably cost about £1000, and towards that sum £550 have already been promised, £250 by Mr. W. Cadbury, £100 each by Mr. Albright and Mr. George Kenrick, and £50 each by Mr. W. Barrow and Councillor Nettlefold. The objects of the society are thoroughly praiseworthy and sensible, the committee is

influential and enthusiastic, and there can be no doubt that it will ultimately gain for Birmingham a great amount of health and pleasure.

The Birmingham and District Crippled Children's Union.

Few societies can point to a better record for eight years' work than the Birmingham and District Crippled Children's Union. Within the period mentioned the union has started a small convalescent home, it has persuaded the education authorities to start special schools, and it has started its own school of handweaving for girls. In addition it has found employment for a large proportion of the boys who have come into its care, it has sent 1400 children to convalescent homes, has provided medical and surgical advice, has given assistance in procuring the necessary appliances, and has supervised their application and use. At the present moment it is working hard to provide a properly equipped nursing home where hip and spine diseases can be treated in the early stages in the open air. For this purpose the committee requires £6000 for building expenses. Towards this it has obtained £2113 and it has been promised £25 for every £100 raised and an additional £100 for every £900. The committee therefore requires donations to the extent of £2600 and deserves hearty support, for it does everything that it can to avoid undermining parental responsibility; indeed, during the past year the parents of the patients paid £55 and collected amongst their friends £157. Support is required, however, not only for building but also for maintenance, for during the past year there was a deficiency of £264 and subscriptions and donations for maintenance purposes are urgently needed.

June 28th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

University of Liverpool: Inter-Universities Debate: Civic Grant: Research Diplomas.

PREPARATIONS are already being made by the Guild of Undergraduates of the University of Liverpool for an inter-universities debate to take place on Nov. 23rd. The University of Cambridge will furnish the proposer and Aberystwith the opposer. Invitations have been issued to all the universities of England and Wales except the University of Oxford, which has declined to support the scheme. Representatives will arrive in Liverpool during the afternoon of Nov. 23rd and will be shown over the University buildings. The debate is to be opened at 5.15 P.M., and the division will be taken at 8 P.M. Invitations have been extended to both sexes in universities where there are women students.—At the meeting of the city council held on June 13th it was agreed to renew the grant of £10,000 to the University of Liverpool for the year 1906 on certain conditions, one of which was that the finance committee of the city council should arrange with the Commissioners of the Treasury to allow their visitors when inspecting the University for the purposes of the quinquennial report for 1907, to prepare and to furnish to the corporation a report dealing specially with the educational methods of the University in relation to the needs and requirements of the city; and, if required by the corporation, to allow an expert appointed by the corporation to coöperate with the Treasury visitors in inspecting the University and making their report. Another condition was that of the £10,000 not less than £1000 should be devoted to Liverpool scholarships, including the assistance of undergraduates and post-graduates and the payment and remission of fees. An amendment that the sum should be reduced to £7000 was lost by a large majority.—The medical faculty has recently decided to grant diplomas under certain conditions to research students in anatomy, bacteriology, and biochemistry. These diplomas are intended for advanced students who have worked for three terms in the University laboratories and have carried on research work to the satisfaction of the dean of the faculty. Students who desire to obtain these distinctions must, before entering on their course of research, have passed an examination of high standard approved by the faculty in the subject selected.

Death of Mr. Robert Rochfort Rae, L.R.C.S. Irel.

Mr. R. R. Rae of Netherfield-road died at Hoylake on June 1st at the age of 64 years. Mr. Rae received his medical education at the Ledwich School of Medicine, Dublin, and received the diploma of Licentiate of the Royal College of Surgeons in Ireland in 1863. He held the appointment of district police surgeon at the Rosehill Bridewell for upwards of a quarter of a century and was very popular with the police officials. The remains were conveyed to Dublin for interment on June 4th and on their arrival at the Liverpool landing-stage were met by an escort of the city police. This action on the part of the head constable was intended as a tribute to Mr. Rae's memory and in appreciation of the manner in which he had discharged his duties in connexion with the bridewell for a very long period.

Maghull Home for Epileptics: Annual Meeting.

The annual meeting of the subscribers to this home was held on June 16th. The committee, in its seventeenth annual report, stated that during the year 30 males and 14 females had been admitted and that on Dec. 31st, 1905, there were in the home 108 males and 100 females; a total of 208. 36 had been discharged and three had died. Although the accommodation was not so heavily taxed as was formerly the case there was still need of further room, especially for children. The various education authorities had placed upon them the work of providing for epileptics and feeble-minded children and where they had not a home of their own were disposed to make use of institutions such as the one at Maghull, paying for the cost of teaching and maintenance. Every patient in the institution had some duty to perform, however seemingly unimportant. Those who took up regular duties received a small allowance by way of gratuity, the sum paid in this manner during the year being £176 17*s.* 1*d.* The farm showed a profit on its working of £87, and a new industry taken up in the past year had been the curing of bacon of their own production. While, however, work was one of their chief resources in the common-sense treatment of this malady, recreation and education had an important place. There is still a debit of £10,500 due on mortgage of the home property, less £1183 cash in bank. The Bishop of Liverpool, in moving the adoption of the report, eulogised the methods and benefits of the institution, and Dr. J. M. Rhodes of Manchester, in seconding the motion, said that it was most important for epileptic children to enter institutions like the one at Maghull early in their lives. The benefits of such a home could not be over-estimated.

Liverpool Select Vestry.

Mr. H. Jenner-Fust, Local Government Board inspector, at a recent meeting of the select vestry, in the course of a statement said that the new infirmary at Highfield gave as good accommodation as could well be wished for and would be a great advantage to the parish. He was pleased to see that provision was being made for scrofulous and ophthalmic diseases in children at Olive Mount. The alterations at Kirkdale for the reception of a considerable number of adults could not fail to ease the pressure which had existed so long at Brownlow-hill. So far they had not succeeded in emptying the attic wards of the infirm old people, which it was hoped would have been the result of the opening of the Highfield infirmary. Liverpool had always had a high character in regard to outdoor relief and it was not satisfactory that, in spite of the great improvement in trade, there was now an increase as against last year. In most of the unions of the county there had been a decrease of pauperism and especially of outdoor relief. Rochdale and Manchester had been investigating the subject and it might be desirable to have an investigation in Liverpool to see whether there had been any relaxation in the application of the principles which had guided the administration of relief in the past. The reports of the inspection of the various institutions were very satisfactory. He had often praised the administration in Liverpool, carried on in spite of the drawbacks in the buildings.

Liverpool Hospitals: £10,000 to be Distributed.

The Lord Mayor presided at a most business-like meeting of the committee of the Hospital Saturday and Sunday Funds held at the town-hall on June 19th, the attendance being large and representative. It was unanimously resolved that the sum of £10,000 should be distributed as an interim allocation to the same charitable institutions and in the same proportion as last year, a second distribution to follow about four months hence, when all the collections have been made and paid into the bank. The Hospital Sunday Fund, it was reported, showed a falling off of about £150 to date as compared with last year, while the

ladies' street collection had also declined. The Hospital Saturday Fund—the weekly collections being the most trustworthy source of income—was about normal. On the whole, therefore, the prospects were that the total amount will not reach the aggregate of last year though the general needs, without taking account of the special demand through recent disasters, were growing. The distribution will take place at once.

June 26th.

LEEDS.

(FROM OUR OWN CORRESPONDENT.)

Appointments at the Infirmary and at the Public Dispensary.

THE board of the infirmary, acting on the recommendation of the Faculty, recently decided to create two new appointments—namely, those of medical and surgical registrar. To the former Mr. G. W. Watson, M.D. Lond., M.R.C.P. Lond., has been appointed, and Mr. Harold Collinson, M.B., B.S. Lond., F.R.C.S. Eng., has been chosen for the latter position. The duties connected with these new appointments will be generally the same as in the London hospitals. Mr. F. J. Birks, M.B. Lond., has been appointed honorary anæsthetist to the dispensary, and Mr. G. E St. Clair Stockwell, M.B., B.C. Cantab., has been appointed honorary clinical assistant to Dr. W. H. M. Telling at the same institution.

Changes at the Medical School.

Professor de Burgh Birch has resigned the position of Dean and Professor A. S. F. Grünbaum was unanimously nominated as his successor and was elected Dean of the Faculty of Medicine and Chairman of the Board of the Faculty. Old students of the School of Medicine whose memory carries them back to a date anterior to 1884 will remember that there was an annual appointment of president and also an appointment of secretary and registrar. It was the latter of these two officers who performed the well-recognised duties of Dean of the Medical School as that term is understood in the London schools. When in 1884 the Medical School became the medical department of the Yorkshire College the post of president lapsed and the post of secretary and registrar became known as that of the Dean of the Medical Department. This position was held by Mr. Scattergood until the time of his death in 1900 and those only who were intimately associated with him in the work know how valuable his services were and how ungrudgingly they were given. When the University was formed the term "Dean" began to be used in the other Faculties and we find a Dean of the Faculties of Science, of Arts, and of Technology, as well as of Medicine. Professor Birch and Professor Grünbaum, in respect of their holding the office not only of Dean but of chairman of the Board of the Faculty of Medicine, have had imposed on them the same duties which were formerly carried out by Mr. Scattergood and in this way the "Dean of the Faculty of Medicine" has extensive duties in another capacity which make him the responsible head of the Medical School. Professor Grünbaum's colleagues consider themselves fortunate in being able to nominate one who during his short connexion with the University has been able so fully to master all the details of the management and administration of the Medical School. It is impossible to pass over Professor Birch's resignation without a word as to the excellence of his administration during his six years of office. Accessible at all times to the students, with whom he was a great favourite, kindly and courteous in his bearing, he maintained the high standard of efficiency and businesslike ability set by Mr. Scattergood and the school is under a deep debt of gratitude to him.

Death of Mr. Robert Smailes, L.R.C.P. & S. Edin.

By the death, at the age of 53 years, of Mr. Robert Smailes Leeds loses one of its best known and most highly respected medical men. The cause of death was a sudden attack of cardiac failure supervening on acute pneumonia. Mr. Smailes was born at Whitby in 1852 and was educated at the Leeds School of Medicine, taking his qualification in 1883, and since that time he had been steadily engaged in private practice in the city. Among other public appointments he was honorary medical officer to the Unmarried Women's Benevolent Institution and for some years carried on with his friend Mr. J. J. Pickles the duties of steward of the West Riding Medical Charitable Society. He was a prominent Freemason and had held the position of Master of the Zetland Lodge. He was a Churchman and in politics a Conservative. He kept up an active interest in the welfare of his old school of medicine and credit is due to him for the part which he took for many years in coöperating with the authorities in securing the success of the October medical dinner in connexion with the opening of the winter session. A large and representative assemblage of medical men and of the general public paid the last token of respect on June 23rd to the memory of one who will always be spoken of among his professional brethren as a straightforward and honourable colleague.

June 26th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

The Meat- and Milk-supply of Cardiff.

IN his recently issued annual report the medical officer of health (Dr. E. Walford) deals with the dangers arising from the inadequacy of the inspection of meat which is slaughtered in districts outside Cardiff but is brought into the town to be sold. There are no private slaughter-houses in Cardiff, so that it is possible to carry out a very careful inspection of the meat which is slaughtered in the town. During 1905 over 80,000 animals were slaughtered in the public slaughter-houses and 84 were condemned as unfit for food. In each case of suspected tuberculosis or other disease specimens of the morbid deposit are sent to the public health laboratory for examination. In order to safeguard more thoroughly the interests of the inhabitants of Cardiff Dr. Walford suggests that powers should be obtained to establish meat stations for the examination of all carcasses slaughtered outside the town. Difficulties of a similar character appear to have arisen in connexion with the milk-supply. Dr. Walford states that during the summer months his attention was drawn to two cases of typhoid fever in the residence of a milk purveyor outside the city boundaries, one of the persons attacked being a man in charge of the cows. He obtained an order authorising him to inspect the premises which he found in a dirty condition from the accumulation of manure. The occupier was not registered under the Dairies, Cowsheds, and Milkshops Order and appeared to be ignorant of the provisions of the Order. An order was made by the Cardiff sanitary authority prohibiting the sale of milk from this dairy within the city and no further cases of the disease occurred in connexion with this particular supply. Dr. Walford draws attention to the imperfections of the Infectious Disease (Prevention) Act under the provisions of which he took the steps detailed above. He points out that there is not only a considerable amount of delay in putting the Act in force but that there is nothing to prevent a milk vendor who is prohibited from supplying milk in Cardiff selling it in his own or an adjoining district provided that the local authorities raise no objection.

Pauperism in Cardiff.

Mr. F. T. Bircham will shortly retire from the position of Poor-law inspector of the Local Government Board for Wales and Monmouthshire and during the past few weeks he has been giving interesting and instructive details of the condition of pauperism in the various unions of his district. When addressing the Cardiff board of guardians Mr. Bircham spoke of the economical and careful administration of the workhouse and urged the establishment of an institution to which consumptive persons could be sent. The treatment of idiot and epileptic children he thought should be dealt with by groups of counties rather than by poor-law boards. In recent years, although the proportion of paupers to the total population has very much decreased, the actual expenditure has enormously increased. This increase is hardly noticeable as regards the indoor poor but is almost entirely attributable to the extension of relief to outdoor paupers. Mr. Bircham urged the guardians to back up their relieving officers and to make destitution the one test of the necessity for relief. He also spoke favourably of enlisting the services of volunteer visitors to the homes of the poor.

Treatment of Consumptive Poor at Merthyr Tydvil.

During the past year or two consumptive persons have been sent from Merthyr Tydvil to Sandgate at the cost of the Merthyr Tydvil board of guardians, but it is now suggested that the buildings which have been used by the corporation as a small-pox hospital should be acquired by the board and

used for the treatment of consumptives. With the completion of the new isolation hospital now in course of erection the old small-pox hospital will no longer be required by the corporation.

The International Congress on School Hygiene.

At a meeting held at Cardiff on June 22nd, presided over by Dr. T. H. Morris, chairman of the education committee of the Glamorgan county council, a committee was formed in connexion with the International Congress on School Hygiene to be held in London next year. A second committee was also appointed to promote the study of hygiene in South Wales and Monmouthshire.

The Ebbw Vale Workmen's Doctors' Fund.

A meeting of the committee of this fund was held on June 18th. It was reported that fresh terms had been proposed to the surgeons who had rejected them and had also declined to negotiate in any way with the present committee except through the intervention of the British Medical Association. After some discussion it was decided to give all the medical staff notice to terminate their engagement with the exception of those who would accept the terms of the committee, and, further, that steps should be taken to fill the vacancies. This is, however, only a recommendation of the committee and it will be subject to consideration at another meeting.

The Bristol University Scheme.

Mr. H. O. Wills has promised a gift of £10,000 towards the foundation of a university for Bristol. This makes the total sum promised for the purpose amount to £40,000, Lord Winterstoke and Mr. J. S. Fry having previously contributed £10,000 respectively and Sir F. Wills and Mr. F. J. Fry £5000 each.

June 26th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Royal Commission on the Care and Control of the Feeble-minded.

THIS Commission has held three sittings in Edinburgh at which evidence was given on the subject of the care and control of the feeble-minded. Much interesting evidence was given by medical men and others. The field covered was wide, for it dealt with feeble-minded and imbecile children, with feeble-minded adults, dipsomaniacs, habitual criminals, tramps, and epileptics. The evidence was practically all in favour of definite action being taken for dealing with these different classes. The granting of compulsory powers was considered essential and the bulk of opinion would have these powers devolved upon the lunacy authorities. Some of the legal witnesses held that no proper steps could be taken until the public gave up the absurdly sentimental objection to interference with "the liberty of the subject." The evidence is too lengthy to attempt to give it even in abstract here but the above stand out clearly as its leading points.

New Lectureship in the University of Edinburgh: General and Experimental Psychology.

It is of medical interest to note that the Edinburgh University Court has been able to institute a lectureship on experimental psychology. It has been able to do so as a result of representations made by Professor Pringle Pattison to the Combe Trust which has given an annual grant of £250 towards the salary of a lecturer. Aberdeen in Scotland and several English colleges already have lectureships of this description but on both sides of the border the claims of this line of investigation have not received much recognition. On the continent and in America, on the other hand, there are many elaborately equipped departments. It is hoped that the lecturer may be appointed in time to begin work in the winter session. When the physics department is transferred to its new quarters in the old Royal Infirmary the new department will be housed within the gates of the University.

The Royal Edinburgh Hospital for Incurables.

This excellent and beneficent institution has held its annual meeting and is calling loudly for an extra £1000 per annum from the charitable public.

Royal Victoria Hospital for Consumption, Edinburgh.

This useful hospital has also had its annual meeting at which the sixteenth annual report was submitted. As a result of the International Fair held last November a sum of £13,245 was handed over to the committee and in view of this it feels justified in proceeding to erect two new pavilions for patients and a block with dining-room and kitchen for patients and suitable quarters for the resident staff. Since the opening of the hospital 1082 individual patients have been treated in the hospital. There have also been 172 "visitant" patients who have the same *régime* as the others during the day but return home to sleep. The daily average in the hospital is now 58 with about 20 "visitants." The excess of ordinary expenditure over total income for the year was £1186. An appeal is made for more money, which it is all the more necessary to get as the committee considers itself justified in still further enlarging the hospital.

Post Graduate Course in Edinburgh.

The syllabus for this course has just been issued and can be obtained from the Secretary, University New Buildings, Edinburgh. A very complete course of advanced instruction is to be supplied during the three weeks which the course is to occupy.

Glasgow Hospital for Skin Diseases.

At the fifty-fifth annual meeting of the supporters of this hospital Lord Overtoun presided and Sir Thomas McCall Anderson submitted the medical report. In the course of the report it was stated that 1771 new cases had been treated at the hospital during the past year, and of these 72 were sent to the dermatological wards of the Western Infirmary which are in connexion with the "Skin Hospital." The number of students attending the summer clinique was 53. The financial statement showed a balance on the right side of £11 19*s.* 1*d.* and it is satisfactory to note, as the treasurer pointed out, that though there is a slight decline of the ordinary subscriptions the workmen's or employees' contributions continue to increase. At the close of the meeting the directors took the opportunity of congratulating Sir Thomas McCall Anderson on the honour of knighthood which had been conferred on him by the King since the last annual meeting.

Ptomaine Poisoning.

The medical officer of health of Partick has reported to the town council a series of cases of ptomaine poisoning. In all five families were affected and out of the 19 persons constituting these families 12 were seriously ill. In each family only those escaped who had not eaten any of the meat in question. In some cases only a very small portion of the meat was consumed but in all the symptoms that developed were severe. The shop from which the tinned meat was obtained was the same in the case of all five families. The meat which remained in the shop has been seized and has been subjected to bacteriological examination along with the portions which were still in the houses of the sufferers but the investigation has not yet been completed. Fortunately all those affected are now out of danger.

Cerebro-spinal Meningitis.

From March 10th to June 22nd there have been altogether 44 known cases of cerebro spinal meningitis in Glasgow, 32 of these patients being under 15 years of age. About 30 of the 44 cases have terminated fatally. In a memorandum on the subject prepared for the health committee of the town council Dr. A. K. Chalmers, medical officer of health of Glasgow, says that the disease may prove fatal in less than 24 hours or it may be prolonged over several weeks. It is liable to be confounded with some other forms of brain disease and would appear to be sometimes regarded clinically as influenza or pneumonia. It is associated with the presence of Weichselbaum's diplococcus in certain tissues of the body and is infectious, although the conditions of its spreading are but ill known. Last year it occurred in an epidemic form in New York, in some parts of Central Europe, and in Northamptonshire in England. Dr. Chalmers further states that the malady is characterised by acute symptoms, chiefly referable to the nervous system. The onset is usually sudden, with headache, shivering, and occasional vomiting. Stiffness of the muscles of the neck with retraction of the head may follow, and there may be delirium, sometimes alternating with apathy and stupor. There may be tenderness along the cervical or dorsal spine or it may be more

generally distributed. Squint, unequal pupils, and other paralytic symptoms have been noted. Herpes on the lips and a purpuric skin eruption are sometimes present. In some of the children a limited number of spots were present on the skin from the third day of their illness. These were few in number, petechial in character, and irregularly distributed. In one child they were present on the abdomen and ankle and in another on the neck and upper part of the chest and on the inner aspect of the thigh and ankles. They were more pronounced than a typhus rash and much more limited in distribution. The pulse and temperature both follow an irregular course and there is usually no relation between them in the early stages. When death results a purulent or sero-purulent exudation may be found on the under surface of the brain or spinal cord.

Munificent Gift to Paisley Infirmary.

The secretary of the Royal Alexandra Infirmary, Paisley, has received from Mr. Stewart Clark, late of Paisley, a donation of £5000 towards the Annie Clark (Mrs. Stewart Clark) Fund for Incurables. The fund, which was instituted by Mrs. Clark, is for the purpose of relieving in their own homes out-door patients suffering from incurable disease. As the demands of the fund had often been in excess of the revenue derived from it, the directors were occasionally compelled to refuse necessitous cases. This, however, will to a great extent be obviated by the handsome gift of Mr. Clark, which brings the funds up to £12,000.

Death of William Davidson, M.B., C.M. Aberd.

At the residence in London of his brother-in-law, Mr. William Will, of the *Sporting Life*, there died on June 13th, Dr. William Davidson, a native of Kinneff and a graduate of the University of Aberdeen. Dr. Davidson was during his studentship at Aberdeen an assistant to Professor J. W. H. Trail and graduated as M.B., C.M. in 1886. For some time he was an assistant in practice in Ayrshire and then at Maryhill, Glasgow, whence he went to Adelaide, Cape Colony, where he had been in practice for about 15 years. About two months ago Dr. Davidson visited London for consultation regarding an internal trouble which has proved fatal. The deceased was extremely popular in his colonial district and was a leader in all the local movements. During the war he was captain of the town guard of Adelaide and met an attack from Kritzinger's commando, his defence of the little town meeting with praise from the authorities. He held the medal for service in the war. To personal courage there was added a kindly heart and he will be much missed. Dr. Davidson leaves a widow and two sons and a daughter.

The Carswell-Gilchrist Fund.

The sum of £534 3*s.* 8*d.* has been collected for the Carswell-Gilchrist Fund, and after deducting expenses—chiefly for printing and postage—a balance of £520 has been handed to Mr. John Carswell and Dr. Marion Gilchrist to assist them in defraying the costs of their defence in the recent litigation in which they were involved.

June 25th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Official Report on the Dublin Hospitals.

THE annual report of the board of superintendence of the Dublin hospitals, including all those which received grants from Parliament, has just been published. The board, under the chairmanship of Sir Francis W. Brady, found no serious fault with any institution but some valuable suggestions have been made. In the case of the Cork-street Fever Hospital it remarks that the bed linen appeared to be discoloured and that the fact was reported as being due to the use of water from the Poddle river in the laundry. The board recommended the substitution of the Vartry water, adding that "sheets washed in water so deeply impregnated with organic matter are unsuitable for hospital use." In noticing the Royal Victoria Eye and Ear Hospital the board, after approving of the state of the wards, day rooms, and culinary department, says, "We cannot but regret that the example of providing day rooms is not followed by the general hospitals of our city; ..... it is contrary to hygienic principles to have convalescent patients eating and living surrounded by patients confined to bed." The authors of the report allude approvingly to the open-air verandah which has recently been constructed at Steevens's Hospital and also to the satisfactory condition of the House of Industry Hospital. Concerning the latter institution they say that the governors have shown great judgment and liberality in constructing in the Whitworth Hospital during the past year a well-equipped bacteriological laboratory as an assistance to the diagnosis of disease by modern and approved methods. In a paragraph referring to the Rotunda Lying-in Hospital the report says that owing to the congestion in the maternity wards it has been decided to erect an additional wing which will allow of the thorough disinfection of each ward in rotation.

The Public Health Appointment in Belfast.

At a meeting of the public health committee of the corporation of the city of Belfast held on June 21st the question of the salary to be attached to the office of medical superintendent, which 21 members out of a total of 60 voted should be £600 annually, was discussed in an informal manner. Dr. C. J. Clibborn, medical inspector of the Local Government Board, who attended, expressed himself strongly of the opinion that the salary ought not to be less than £800, inasmuch as any less amount than that would not have the effect of attracting applications from men possessing the necessary qualifications and experience. In view of Dr. Clibborn's position under the Local Government Board the fact that he was present and expressed himself as he did was of considerable significance in regard to the views of the Board which, fortunately, is in a position to enforce them. A very strong memorial has been sent to the Local Government Board on the whole question, urging it to use its veto in reference to the smallness of the salary proposed to be given to its new medical officer of health by the Belfast corporation.

Portadown Water supply.

At a special meeting of the Portadown and Banbridge Joint Water Board held on June 25th it was announced that the two service reservoirs were now full and it was arranged that on Thursday, July 5th, the water was to be turned on. This new scheme will give an admirable supply of good drinking water conveyed from the Mourne Mountains to two progressive Ulster towns, Portadown and Banbridge.

Irish-speaking Practitioners in Ireland.

At a meeting of the Oughterard board of guardians held on June 21st a letter was read from the Local Government Board with reference to the advertisement issued by the guardians inviting applications for the medical officership of the Oughterard workhouse and dispensary district, with the clause inserted that only a man speaking the Irish language would be elected. The letter stated that such a provision was illegal and that an election which had just taken place should be quashed. The law has been obeyed and another candidate has been since elected. Oughterard is an outlying district in the west of Ireland in which it is said that many of the poor people cannot speak fluent English.

Half-yearly Report of Belfast Union.

In his last half-yearly report of the Belfast workhouse the Local Government Board inspector, Mr. Agnew, states that as regards the infirm the state of matters in reference to their accommodation is not creditable. He recommends the provision of a proper children's infirmary as there cannot be accurate classification of disease or adequate supervision in the present buildings which are most unsuitable in regard to light, ventilation, and sanitary arrangements. The following amounts have been spent on outdoor relief for the years ended March, 1904, to March, 1906: 1904, £367 2*s.* 6*d.*; 1905, £620 18*s.* 6*d.*; and 1906 £1083 8*s.* There has been a marked increase in the years 1905 and 1906, with an ultimate excess of £716 5*s.* 6*d.* in 1906 over 1904. This matter demands very earnest attention on the part of the guardians. The inspector concludes his report by stating that the general management of the workhouse is highly satisfactory, as is also the discharge of their duties by the several officers of the union.

June 26th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Protection of Infant Life.

AT a meeting of the Academy of Medicine held on June 12th Professor Budin submitted some statistics which supplied a further proof of the practical utility of dispensaries where mothers can obtain advice as to the rearing

of their infants. These dispensaries (*consultations de nourrissons*) were inaugurated by Professor Budin at the Hôpital de la Charité in Paris during 1892 and are now being gradually introduced in all the territorial departments. Wherever they are in operation the infantile mortality declines and under their influence breast feeding is adopted more and more in preference to artificial feeding. The State and the heads of some industrial establishments are now doing their utmost to encourage breast feeding of infants by their workwomen and some employers in Paris even allow opportunities for the suckling of infants by their mothers during working hours. At the dispensaries children up to the age of two years are examined and weighed once a week and such advice as may be necessary is given to the mothers. Breast feeding is recommended but mothers whose natural supply is insufficient receive an allowance of sterilised milk of good quality.

The Thyroid Body and the Sensation of Hunger.

At a meeting of the Society of Biology held on June 2nd M. Léopold Levy and M. Henri de Rothschild communicated a paper giving the results of thyroid treatment in the case of 100 patients. Among this number there were 21 who showed an increase of appetite and of the sensation of hunger. Taking into consideration the feeling of hunger experienced after the ingestion of thyroid material and the phenomena of hunger observed in exophthalmic goitre, in myxœdema, in thyroiditis, and in thyroid changes associated with pregnancy, it was permissible to infer that the thyroid body was a factor in the causation of hunger and that there was a "hypothyroid anorexia" for which appropriate treatment was required. In influencing the sensation of hunger the thyroid body acted as a regulator of the nutritional ferments as well as of the defensive ferments; it was also a regulator of the bulbar centres—namely, the centres for the sensation of hunger, for thyroid headache, and for the heart.

Administration of Iodide of Potassium by the Rectum.

At a meeting of the Société Médicale des Hôpitaux held on June 8th M. Queyrat showed a patient suffering from tertiary syphilis which had worked havoc with his lips and nose. The disease was spreading in spite of mercurial treatment in all its forms and there was absolute intolerance of iodide of potassium. In these circumstances, M. Queyrat had recourse to administration by the rectum, a method which he had used for a long time when patients for whom iodide of potassium was obviously indicated were found to be intolerant of it. He therefore prescribed daily enemata of 50 grammes of infusion of marsh mallow containing progressive doses of two, six, and eight grammes of iodide of potassium. He has observed that iodide of potassium absorbed by the bowel has a very remarkable therapeutic action.

Treatment of Tuberculous Disease of the Joints by Injections of Chloride of Zinc.

At a meeting of the Surgical Society held on June 20th M. Walther showed a woman about 30 years of age whom he had treated for white swelling of the right knee in 1891 and for the same disease in the left knee in 1896. On each occasion the affected joint was treated with "sclerogenous" injections of chloride of zinc according to the method of M. Lannelongue. The extended periods of 15 and 10 years that have elapsed since the respective operations enable a definite opinion to be formed as to the complete success of the results. The patient treated by M. Walther walks perfectly well; both knees have the normal range of movement and there has never been the least sign of relapse.

June 25th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

A Conference on Tuberculosis.

THE annual meeting of the German Committee for the Sanatorium Treatment of Tuberculous Patients was held on June 1st, under the presidency of Count Posadowski, the Secretary of State for the Interior. In his inaugural address the President said that the measures adopted for the prevention of tuberculosis during the last ten years had yielded excellent results and that the action of the committee had contributed materially to the success of the movement. The medical profession hoped that their endeavours might in course of time have the effect of extinguishing this terrible disease in the same manner as several diseases prevalent in former ages had been extinguished. If that was possible the German nation, so prominent in every department of scientific and practical work and so wealthy, ought to co-operate with the medical profession in that object. He hoped that more sanatoriums might be opened by the committee. As the methods of preventing or dealing with tuberculosis included a good deal more than the treatment of patients in sanatoriums, a motion was adopted to the effect that the name of the committee should henceforth be the Central Committee for the Prevention of Tuberculosis. Dr. Niedner, the general secretary, then presented a report showing details of the work of the committee. He said that 26,000 persons (19,000 men and 7,000 women) had been under treatment in sanatoriums in 1905 and that from 1901 to 1905 about 38,000,000 marks had been spent in the treatment of tuberculous patients under the workmen's sickness insurance law. As long as a specific against tuberculosis was unknown the sanatoriums must be the principal centres of origin for measures directed against the disease. Professor Kirchner then read a paper on Tuberculosis in Childhood. He said that the disease was more frequent among children than had hitherto been supposed. Whilst the general mortality from tuberculosis had considerably decreased—namely, from 319 per 100,000 in 1875 to 196 per 100,000 in 1903, being a decline of 38·4 per cent.—the mortality of children had become greater; from the eleventh year of age tuberculosis was a more frequent cause of death in children than any other disease. In the struggle against tuberculosis it was a primary requisite that healthy children should be protected against infection; the home must be regarded as the principal point of issue of the infection and the tuberculous members of families must therefore be taught how to deal with their expectoration. Frequent cleansing of their rooms and in some cases removal of the patients from their homes were essential. Notification of tuberculous cases ought to be made compulsory. Although tuberculosis was less likely to be contracted in school than at home the separation of tuberculous from healthy children was very important. The "holiday colonies" had done much in the prevention of tuberculosis. For the curative treatment of the disease sanatoriums were as useful in the case of children as in the case of adults and special institutions for the young ought therefore to be established. The conference then terminated.

An International Conference on Cancer.

An International Conference on Cancer will be held at Heidelberg on the occasion of the opening of the new institution for cancer research under the direction of Professor Czerny. Professor Ehrlich has invited the members of the conference to visit the Institution for Experimental Therapeutics at Frankfort where he will exhibit his collection of specimens bearing on the subject of cancer. An address will also be delivered by Professor Leyden.

The Prevention of Ophthalmia Neonatorum.

Dr. Herff of Basle, writing to the *Münchener Medicinische Wochenschrift*, recommends a substance to which the name of sophol has been given as a prophylactic against blennorrhœa of the eyes of newly born children. He said that instillation of nitrate of silver not only caused swelling and pain but was not absolutely trustworthy, as about 0·2 per cent. of the infants treated in this way nevertheless suffered from blennorrhœa. Protargol was milder and more efficacious as infection only occurred twice in 3009 cases in the Basle clinic. Argyrol was a safe prophylactic but its high price was a barrier to its general application. A new compound termed sophol had therefore been introduced. Sophol was a nitrate of formonuclein; it had a brownish-yellow colour in solution and was easily affected by light. Its principal advantage was that it did not produce any inflammation. A 5 per cent. solution had no irritant or painful effect whatever and a 10 per cent. solution produced no more than a slightly unpleasant sensation. Of 1200 children treated by instillation of sophol only one contracted blennorrhœa, the case being one in which the labour required operative help. Bacteriological comparisons of protargol and sophol showed that the staphylococcus pyogenes aureus was destroyed within five and a half hours by a 1 per cent. solution of the former and a 0·3 per cent. solution of the latter. A solution of argyrol of 0·4 per cent. strength required 48 hours to destroy that bacillus. Also against the bacillus pyocyaneus sophol and protargol were more efficacious than argyrol.

June 25th.

ITALY.

(FROM OUR OWN CORRESPONDENT.)

Attempted Assassination at the Roman Lunatic Asylum.

JUST ten years ago[1] I drew attention to the rehabilitation of the historic *manicomio* in the Trastevere, then one of the burning questions in the Roman medical world, but to day the project is still in the "period of gestation," though incidents calling loudly for its completion are of all too frequent occurrence. Overcrowding, with its attendant lack of surveillance and of effective control, has, even as recently as June 20th, had its inevitable issue in another outbreak on the part of the inmates whereby the life of one of the medical staff was within an ace of being sacrificed. Dr. Nicola Majano was that day interviewing some of the more violent cases when he saw one of them (Trezza by name) crouching in a corner with his hands behind his back. Dr. Majano was in the act of interrogating him as to what he was concealing when at that moment another of the inmates walked up to Trezza and took from him a tobacco pipe. Smoking being forbidden, Dr. Majano had just asked how the pipe had come to be there, when a third patient, a tall and powerful epileptic subject, standing behind him dealt a savage blow with a piece of glass at Dr. Majano's throat, followed by two other blows at his face. Providentially a double collar blunted the first blow but the second took effect over the right malar bone and the third lower down on the cheek, causing much loss of blood. The keepers were at once on the spot, the assailant was overpowered and put into the *camicia di forza* (strait waistcoat), and Dr. Majano's wounds—the first of which would have been fatal but for the stiff double collar—were treated by his colleagues, Dr. Sergi and Dr. Bonfigli. The incident had its origin in a conspiracy among the patients, one of whom had shortly before, in a violent fit, broken a pane of glass, while another, the epileptic, had secured and hidden one of the fragments before they were removed by the keepers. With this fragment the epileptic aforesaid, who cherished a strong antipathy to Dr. Majano, attempted the assassination with the collusion of his fellows, the attempt being the latest of many violent deeds on the part of an inmate destined surely for another class of *manicomio*, dangerous criminal as he was, with just sufficient intelligence to have been the go-between of forgers and coiners. The incident—the third in a series, two of which terminated fatally within the last few years—has again brought the "*manicomio* question" to the front, with, it is to be hoped, a speedy and effective solution of the same. The statistics of lunacy in Italy, as elsewhere on the continent, show a marked tendency to increase, and, indeed, the Roman *manicomio* has had to be relieved of its inmates from time to time in proportions such as these: 300 sent to Ceccano, 200 to Teramo, 100 to Imola, and 60 to Siena. Two supplementary asylums are urgently required, while a third cannot follow these too soon if Rome is to keep pace in this department with the sister capitals of Europe, in one of which (Berlin) a fourth asylum has just been inaugurated on the same extended and well-appointed scale as its three predecessors.

The Study of Criminal Anthropology.

If in practice Italy is behindhand in dealing with mental alienation and its victims, in theory she is second to none, particularly in the cognate subject of criminal anthropology, that "youngest of the sciences" which she claims as her own. Of the many *manuali* (hand-books) devoted to it the latest and also the best has just seen the light at Milan, issued by the publishing firm of Hœpli. Its title is, "I Principi Fondamentali dell' Antropologia Criminale," and its author is Dr. Giuseppe Antonini, medical superintendent of the *manicomio* of the province of Udine in the Venetian territory. Passing in review the Lombrosian doctrine as to what constitutes "criminality" and presenting a well-digested "appreciation" of Lombroso's predecessors, Dr. Antonini proceeds to set forth the anthropological theory of crime, enumerating and classifying the medico-legal criteria which ought to determine the judicial authority in cases under trial; and concluding with a *guida sintetica* for the diagnosis of the various forms of mental alienation in connexion with criminal acts. In arrangement and literary style it has the lucidity and *concinnitas* characteristic of the Latin mind and, if adequately translated, ought to find a much wider circle of readers than that to which it is primarily addressed.

June 23rd.

[1] THE LANCET, June 27th, 1896, p. 1834.

Obituary.

ROBERT THOMAS POOLE COLLYNS, M.R.C.S. ENG.

BY the death of Mr. Collyns on May 11th the inhabitants of Wimbledon have lost a valued friend and a most competent medical adviser. Robert Collyns, the son of the late Dr. Collyns, rector of Farringdon, Devon, was born in 1853. He began his medical training as pupil to the late Mr. H. S. Taylor of Guildford, entering subsequently at University College Hospital, where he became house surgeon under the late Mr. Christopher Heath. His next appointment was that of resident medical officer at the Atkinson-Morley Convalescent Hospital at Wimbledon, which he resigned after 15 years to enter into partnership with Mr. E. Pocklington at Wimbledon, joining at the same time the staff of the cottage hospital. He married Miss Edith Sillifant, who survives him, but has left no family. His death took place unexpectedly on May 11th at Brighton where he had gone on the previous day on a professional visit. He was buried on May 15th at Wimbledon. From the commencement of his career Robert Collyns took a keen interest in the practical side of his profession and paid great attention to all the details and arrangements of hospital administration, which was one of his few hobbies. By his long-continued and thoughtful work in the wards he gained a wide experience and a ripe judgment in dealing with illness, whilst his genuine character, unfailing good nature, equable temperament, and indefatigable zeal for his work assured him the confidence of his patients. Those who remembered the spirit in which he worked, shown in early manhood by the prompt cleaning by his own mouth of a choked tracheotomy tube in a hospital case of diphtheria, will see in the honour and sorrow of the great gathering at the graveside a due recognition of a worthy life.

JAMES BUTLER NORRIS CANE, L.R.C.P. & S. EDIN.

Mr. J. B. N. Cane was born in Kilkenny in 1844. His father was the late Alderman Robert Cane, M.D., and three of his brothers entered the medical profession, two of whom survive him. He was educated under the Rev. Mr. St. John, Principal of Nore View Collegiate School, Kilkenny, and later at St. Francis Xavier's College, Dublin. He studied at the Ledwich School of Medicine, Dublin, and at Mercer's Hospital, the County of Dublin Infirmary, and the Coombe Hospital. He took the Cameron gold medal in chemistry in 1865 and also several silver and bronze medals in science from the South Kensington Department. He became L.R.C.P. & S. in 1866 and was resident surgeon to the Birmingham Lying-in Hospital in 1867. He was selected as the medical officer of the Kilmackevoge district of the Waterford union in 1868; he held this post for 31 years and on resigning was pensioned by the Waterford board of guardians. Mr. Cane was noted for very accurate knowledge of the history and folk-lore of his surroundings and frequently lectured on scientific subjects likely to benefit the farmers and country residents of his district. He was for many years the victim of an organised local persecution, during which some hundreds of complaints against him were sent to the Irish Local Government Board, which body held several sworn investigations, each time ending in decisions in his favour. He leaves a widow, a daughter, and a son who is a member of the medical profession. His health had been failing for some time, the result of hardships and exposure in the long journeys over his wild district, and he died on June 22nd at the residence of his son in Kilkelly, county Mayo.

LAWRENCE DUKES, M.A., M.B., B.C. CANTAB., &C.

WE regret to record the death through a lift accident at University College Hospital, London, on June 19th, of Dr. Lawrence Dukes, whilst engaged in his duties of house physician to Dr. J. S. Risien Russell of that hospital. The

promising young physician so suddenly killed in this tragic manner was born on Oct. 22nd, 1880, and was educated at Rugby, at which school his father, Dr. Clement Dukes, is the well-known medical officer. Dr. Lawrence Dukes went to Trinity College, Cambridge, in October, 1898, and secured a second class in the Natural Science Tripos in June, 1901, taking his B.A. degree soon afterwards. He passed the primary Fellowship examination in October, 1902, and then entered University College Hospital, dividing a medical entrance exhibition at that hospital with Dr. T. Lewis. He passed the final M.B., B.C., at Cambridge in December, 1904, and was appointed house surgeon to Mr. A. E. J. Barker at University College Hospital in 1905, occupying that position from May until October. Early in this year he took the M.A. degree at Cambridge and became house physician to Dr. Risien Russell at University College Hospital. At the time of his death he was actively engaged in some original investigations on the causes of vomiting after ether anæsthesia. At University College Hospital he was very popular with the staff, the residents, and the students, and one of his colleagues writes that he was recognised as one of the keenest among the residents in his work although he had many other interests as well. His painfully sudden death has come as a severe shock to his numerous friends and we feel sure that the sympathy of the entire medical profession will be extended to his father and the other members of his family.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. S. Schreiber, professor of anthropology in Bucharest, who was formerly a well-known physician in Vienna, at the age of 72 years.—Dr. Thomas S. Latimer, professor of clinical medicine in the Baltimore College of Physicians and Surgeons.—On June 11th, says the *Novoe Vremya*, Philip Vassilivitch Ovssyannikoff, M.D., passed away. He was a member of the Imperial Academy of Science. With his death Russian ichthyology, histology, and embryology suffer a serious loss. His scientific career began in 1854, when he brilliantly lectured on the subject—*Disquisitiones Microscopicæ de Medullæ Spinalis Textura Imprimis in Piscibus Factitatæ*. In the "fifties" he selected ichthyology as his special study, devoting himself assiduously to the histology of the nervous system of the lobster and also carried out investigations on the Russian sturgeon. He was born in 1827, in St. Petersburg. He finished his medical curriculum at Dorpat. He was elected ordinary professor of physiology and general pathology in the University of Kazan in 1856. In his journeys abroad he attended the lectures of Reichardt in Berlin and Claude Bernard in Paris, and in 1861 was elected vice-president of the Parisian Society of German Physicians. In the University of Kazan he composed a physiological cabinet. The journal adds that, he enjoying a European reputation, the University of St. Petersburg selected him as an ordinary professor, and there also he occupied himself chiefly with the composition of a physiological cabinet, with the aid of which he illustrated his lectures on anatomy and physiology. He went in his summer vacations to Leipsic and Naples and worked in the laboratory of Professor Ludwig and in the Neapolitan Zoological Station. In recognition of his studies on pisciculture, &c., he was awarded the gold medal of the Parisian Society of Acclimatisation.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held recently the following candidates passed in the subjects indicated:—

Surgery.—A. J. Ambrose (Section II.), Westminster Hospital; D. L. E. Bolton, St. Bartholomew's Hospital; R. C. T. Evans (Sections I. and II.), University College Hospital; J. L. Meynell (Section I.), London Hospital; and P. Moxey (Section II.), Bristol.
Medicine.—A. W. S. De Vine (Section II.), Birmingham; F. G. Edholm (Sections I. and II.), Charing Cross Hospital; A. G. Gamble (Sections I. and II.), Leeds; E. Morris, St. Bartholomew's Hospital; P. Moxey (Section II.), Bristol; A. F. Palmer (Sections I. and II.), Cambridge and Middlesex Hospital; O. P. N. Pearn (Section II.), Westminster Hospital; and J. W. Pratt (Section I.), London Hospital.
Forensic Medicine.—A. W. S. de Vine, Birmingham; F. G. Edholm, Charing Cross Hospital; A. G. Gamble, Leeds; and E. D. Richardson, St. Mary's Hospital.
Midwifery.—J. G. Fletcher, Royal Free Hospital; and M. L. Ford and W. J. G. Gayton, London Hospital.

The diploma of the Society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery: A. J. Ambrose, D. L. E. Bolton, A. W. S. de Vine, R. C. T. Evans, and P. Moxey.

UNIVERSITY OF CAMBRIDGE.—At examinations for medical and surgical degrees, Easter term, the following candidates were successful:—

FIRST EXAMINATION.

Part I., Chemistry and Physics.—P. B. M. Allan, Clare; H. C. Attwood, Caius; T. E. Banister, Christ's; H. W. Barnes, Jesus; R. E. Barnsley, A. V. Boyall, and F. W. Burn, Trinity; J. R. W. Burnet and A. G. W. Compton, Caius; H. A. Douglas, H. Selwyn; G. E. Dyas, Caius; J. Billson, Downing; C. M. Forster, Caius; A. C. Gemmell, B.A., Trinity; J. E. Gething, Pembroke; J. P. Glyn, Caius; A. Griffith Williams, Trinity; H. Hartridge, King's; R. Hodson, Pembroke; R. S. Hooker, Emmanuel; D. D. B. Jay, H. Selwyn; A. Jennings, Jesus; T. J. J. Jeppe, Caius; J. C. John, King's; W. L. Johnson, Pembroke; W. H. Jones, B.A., Christ's; A. J. McNair, Emmanuel; H. W. Malden, non-collegiate; R. W. Meller, Trinity; C. J. Nicholson, B.A., and T. H. Oliver, Caius; H. R. Overbury, Trinity; A. B. Pavey-Smith Clare; J. W. Pigeon, Christ's; R. A. Ramsay, Caius; D. A. Reid, Trinity Hall; C. M. Riley, Emmanuel; L. W. K. Scargill, M.A., Trinity Hall; F. T. Shackell, B.A., Pembroke; D. L. Spence, H. Selwyn; H. S. C. Starkey, Downing; W. A. Stokes, Emmanuel; J. Ll. M. Symns, Caius; A. D. Taylor, St. John's; W. F. Thompson and F. S. Tinker, Pembroke; C. B. Wainwright, Caius; H. Walker, Jesus; A. J. Waugh, Pembroke; R. W. Willcocks, Caius; and H. A. Williams and E. Wordley, Emmanuel.
Part II., Elementary Biology.—H. C. Attwood, Caius; T. E. Banister, Christ's; C. H. B. Booth, King's; C. P. Browne and F. W. Burn, Trinity; J. R. W. Burnet, Caius; C. G. H. Campbell, St. John's; L. B. Clarke and E. R. C. Cooke, Emmanuel; F. C. Dickson, Jesus; H. A. Douglas, H. Selwyn; G. E. Dyas, and J. P. Glynn, Caius; E. M. Grace, Christ's; R. S. Grice-Hutchinson, Trinity; H. B. B. Hammond-Chambers, King's; J. B. Hance, Christ's; H. Hartridge and A. E. Herman, King's; R. Hodson, Pembroke; R. S. Hooker, Emmanuel; D. D. B. Jay, H. Selwyn; H. G. G. Jeffreys, Trinity; T. J. J. Jeppe, Caius; J. C. John, King's; W. L. Johnson, Pembroke; A. Kennedy, Caius; G. H. S. Letchworth, Pembroke; D. N. Macleod, Caius; A. J. McNair, Emmanuel; J. R. Marrack, St. John's; R. W. Meller, Trinity; M. Moritz, Emmanuel; R. S. Morshead, Trinity; R. J. S. Morton, Pembroke; G. E. Neilson, Trinity; T. H. Oliver, Caius; H. R. Overbury, Trinity; M. W. Paterson, St. John's; A. B. Pavey-Smith, Clare; J. W. Pigeon, Christ's; H. B. Pope, and R. A. Ramsay, Caius; D. A. Reid, Trinity Hall; H. B. G. Russell, Sidney Sussex; H. N. Sealy, Trinity; A. K. Soutar, Emmanuel; D. L. Spence, H. Selwyn; E. P. P. Stamper, Jesus; G. N. Stathers, Trinity; O. W. D. Steel and W. A. Stokes, Emmanuel; G. B. Sutton and F. S. Tinker, Pembroke; J. R. A. D. Todhunter, Caius; P. Verdon, Jesus; C. B. Wainwright, Caius; H. Walker, Jesus; Ll. M. Weeks, J. B. A. Wigmore, and R. W. Willcocks, Caius; B. H. C. Wilson, Trinity; R. Wordley, Emmanuel; and C. R. Wright, Christ's.

SECOND EXAMINATION.

Human Anatomy and Physiology.—F. S. Adams and W. B. G. Angus, Christ's; M. W. Baker, B.A., St. John's; C. J. Blakie, Caius; A. E. Bonny, Sidney Sussex; R. S. Carey, B.A., Corpus Christi; H. G. P. Castellain, M.A., Trinity; F. G. Cawston, Caius; H. M. McC. Coombs, B.A., Emmanuel; J. H. Crofton, B.A., Pembroke; C. C. Dobell, J. C. Fox, B.A., D. J. Freyer, B.A., and W. B. Gouriay, B.A., Trinity; H. A. Harris, B.A., Emmanuel; C. B. Heald, B.A., Caius; R. H. P. Hick, Christ's; R. F. Higgin, B.A., Caius; L. R. King, B.A., Pembroke; H. Lee, St. John's; J. C. Markiove, B.A., Caius; E. Mellanby, B.A., Emmanuel; H. G. Monteith, B.A., and J. H. Newmarch, Pembroke; A. J. Rae, B.A., Caius; E. D. W. Reid, B.A., Christ's; W. F. Rhodes, B.A., H. Selwyn; H. B. Richmond, King's; J. H. Roberts, B.A., Emmanuel; F. H. Robinson, Queen's; L. M. Routh, and J. G. Sauer, Caius; C. F. Searle, B.A., Pembroke; R. M. Soames, B.A., F. R. Thornton, B.A., Trinity; R. J. Vernon, B.A., Caius; J. M. Wallace, Downing; A. D. J. B. Williams, B.A., Caius; and J. F. W. Wyer, B.A., Emmanuel.

THIRD EXAMINATION.

Part I., Pharmacology and General Pathology.—A. C. Anderson, B.A., Downing; A. Barker, B.A., Trinity; F. A. Barker, B.A., Emmanuel; C. C. H. Binns, B.A., Caius; H. Bowring, B.A., and L. B. Cane, B.A., King's; F. J. Cleminson, M.A., Caius; C. N. Coad, B.A., St. John's; R. M. Collings, B.A., Caius; W. I. Cumberlidge, B.A., and F. S. Eschwege, B.A., Christ's; F. S. Hewett, B.A., and R. A. P. Hill, B.A., Caius; E. B. Hinde, B.A., Emmanuel; C. C. Holman, B. E. Ingleby, B.A., and E. M. Lauderdale, B.A., Caius; A. A. H. Lawrence, B.A., Emmanuel; R. J. B. Lucy, B.A., Caius; W. F. Manners, B.A., Pembroke; R. M. Moore, B.A., St. John's; B. K. Nutman, B.A., and B. A. I. Petees, B.A., Jesus; C. H. Rippmann, M.A., King's; F. S. Scales, B.A., Jesus; E. F. Skinner, M.A., Corpus Christi; J. N. Wheeler, B.A., Christ's; P. F. Wilson, B.A., Caius; W. B. Wood, B.A., Jesus; and O. K. Wright, B.A., and P. P. Young, Christ's.

UNIVERSITY OF BIRMINGHAM: FACULTY OF MEDICINE.—At the fourth examination for the degrees of M.B., Ch.B., held in June, the following candidates were successful:—

Class I.—*J. Fenton, *A. A. Sanders, and F. B. Young.
Class II.—E. J. Boome, H. N. Crowe, E. T. Gaunt, J. K. Gaunt, P. J. Mason, N. C. Penrose, A. J. Smith, R. W. Thompson, and N. V. Williams.

* J. Fenton and A. A. Sanders being equal for the first place are recommended for the Queen's scholarship of ten guineas.

TRINITY COLLEGE, DUBLIN.—At examinations held in Trinity term the following candidates were successful:—

Final Examination in Medicine.—Francis O'B. Ellison, Thomas J. Cobbe, Malcolm K. Acheson, Henry B. Leech, Richard Connell, Langford V. Hunt, John A. Hartley, Theodore C. Somerville, Michael P. Leahy, George S. Walton, William Hutcheson, Ernest C. Crawford, John du P. Langrishe, and Ernest D. Caddell.

Diploma in Public Health.—Part I.: Edward W. W. Cochrane, Charles H. Burtchaell, and Henry Knaggs. Part II.: Charles H. Burtchaell and Edward W. W. Cochrane.

UNIVERSITY OF CAMBRIDGE.—The Raymond Horton-Smith prize for the best M.D. thesis of the year has been awarded to Harold Theodore Thompson, M.A., M.D., B.C., of Christ's College; subject, On Certain Changes in Sensation associated with Gross Lesions of the Spinal Cord.—The newly founded Quick Professorship of Biology is declared to be vacant. The duty of the professor is to devote himself to the study of the protozoa, especially such as cause disease, and generally to promote that branch of science by research and by the superintendence of a laboratory and otherwise. The stipend is about £1000 a year. The election will take place on July 26th. Candidates are requested to send their applications to the Vice-Chancellor, with references but without testimonials, by July 19th.

LONDON FEVER HOSPITAL, ISLINGTON: OPENING OF WARDS AND PRIVATE ROOMS FOR SCARLET FEVER.—Sixty years ago the then newly erected London Fever Hospital was looked upon as an ideal asylum for the reception of persons suffering from infectious fevers but the light of science has spread so far and so fast since those days that the old hospital is now, and has been for years, completely out of date. This fact was recognised by the committee some years ago and its architect, Mr. Keith Young, was requested to prepare plans for a complete reconstruction. These having been approved work was commenced. In the meantime the visitors of King Edward's Hospital Fund, in making their report a few years ago, dwelt upon the out-of-date character of the old buildings. A nurses' home, diphtheria block, steam laundry, and various other less pretentious buildings have from time to time been erected in pursuance of the plans and now four large wards and four private rooms have been added to the reconstructed portion of the hospital. These are intended for the reception of male patients suffering from scarlet fever. They are well built, beautifully finished with all the latest appliances, are light, airy, and lofty, and offer most excellent accommodation. On the day of opening, decorated as they were with large quantities of flowers received from various churches which held their flower services on the previous Sunday, they presented a strikingly pretty appearance. Tens of thousands of people owe their recovery of health and strength to the efforts of the medical staff working in the old wards and tens of thousands of others will reap the added benefit of this improved accommodation. These wards were viewed by a number of medical officers of health and other experts last week and they will be taken into occupation forthwith. The wards on the female side will soon, it is hoped, be taken in hand by the architect and treated on similar lines. It is interesting to be able to relate that a lady was present at the opening of the new wards who well remembers the building of the old ones. The lady is a grand-daughter of the late Dr. Southwood Smith who was a distinguished member of the staff of the hospital 60 years ago and who took the deepest interest in its erection. The hospital supplies a distinct public need in that it offers treatment and isolation to all who can, and will, pay something towards the cost of their illness in hospital rather than remain in their own dwellings for treatment. It has been stated that well-to-do people in infectious illness sometimes cast themselves upon the rates by seeking admission to the hospitals of the Metropolitan Asylums Board and that in doing so they find themselves confronted by an environment not at all to their taste. These drawbacks might be avoided if medical men would recommend such of their patients as need isolation and who can pay a part at least of the cost of their illness to apply for admission to the London Fever Hospital, where they may pay according to their ability. The system of this hospital encourages people to pay somewhat in proportion to their ability rather than to increase the ever-growing volume of gratuitous treatment so lavishly dispensed at the voluntary and rate-supported hospitals. It appears from the statement of a correspondent in a recent issue of the *Times* that no less than two-thirds of the population of London are habitual recipients of charity without seeing any degradation in the practice. It is hoped that the public will continue to extend the help which they have so freely given in the past to the committee of this hospital in order that it may carry through its important scheme of rebuilding.

GUY'S HOSPITAL.—The governors and medical staff of Guy's Hospital have sent out invitations to the garden party which, as we announced last week, is to be held in the grounds of the hospital on Wednesday, July 4th, at 3.15 P.M., when the medals and prizes are to be distributed to the students by Sir W. Cameron Gull, Bart. The laboratories, the museums, the college, the Henriette Raphael Nurses' Home, and the wards will be open to inspection from 3 to 5.30 P.M.

MEDICAL BARRISTERS.—The following medical men were called to the Bar at the recent call-night of Trinity term. By Gray's Inn: E. J. Steegmann, M.B. Durh., D.P.H. Lond., of Isleworth; and W. H. Wright, M.D. Durh., M.R.C.S. Eng., medical officer of health of Alvaston, Derbyshire. By the Middle Temple: W. H. Gimblett, M.D. Durh., of Wallington; and A. W. Fenton, M.D. Dub., of Croydon. By the Inner Temple: John Stokes, M.B. Durh., of Sheffield; and H. E. Drummond-Lloyd, medical student at St. Bartholomew's Hospital.

BUBONIC PLAGUE IN PERU.—Mr. Consul St. John reports that cases are constantly occurring in Lima, Callao, and various other localities along the coast. In fact, the plague may be said to exist in an endemic form from Payta to Mollendo. So far it has not crossed over to the eastern slope of the Peruvian Andes and has ceased to create alarm, as it is generally believed that a serious outbreak is unlikely to occur. However, it is difficult to ascertain on what ground this opinion is based. During 1905 the total number of cases reported was 775, of which 421 terminated fatally.

THE NATIONAL ASSOCIATION FOR PROMOTING THE WELFARE OF THE FEEBLE-MINDED.—At the annual meeting of this association held on June 15th, Lady Frederick Brudenell Bruce, the President, in opening the proceedings gave a summary of the work of the association during the year and of its various committees. It was shown that the members of the medical committee had seen and reported on a large number of candidates whose applications had come before the case committee, and as a result 35 had been placed in appropriate homes, 118 had been assisted in other ways, 63 had been referred to institutions for imbeciles or epileptics, and altogether 607 cases had been under consideration. An inquiry had been undertaken as to the prevalence of feeble-mindedness amongst the inmates of Magdalen Homes, in which Miss Kirby, the secretary, had taken a special interest. The three homes of the association continued to do useful work but it was hoped to concentrate and to coördinate the work of these several establishments in a comprehensive industrial colony, an appeal for which had recently been issued. Dr. G. H. Savage, who was among the speakers, said that the association dealt with cases which came on the fringe of the normal, and the more complicated social life became the more complicated became this "fringe." He held that society was to blame if the criminals, the tramps, and the unfortunates, who were largely recruited from this class, continued to exist in such large numbers. Properly organised and suitable work could save them from vice and crime and enable them to do something towards their own support. The adoption of the tenth annual report was then moved by Lord Stamford and seconded by Mrs. Scharlieb, M.D., who pointed out that feeble-minded children, if neglected, were likely to swell the ranks of paupers and criminals in adult life, and that for the good of society it was absolutely necessary to try to stem the stream of evil at its source. By segregation in an industrial colony, such as the association desired to establish, the evil would be minimised. Sir William Chance, in supporting the motion, testified his practical interest by promising a donation of £50 in aid of the proposed colony (for which has recently been issued an appeal for £10,000), and the report was adopted. The meeting concluded with a cordial vote of thanks to Lady F. Brudenell Bruce for presiding, which was moved by Sir R. Biddulph Martin and seconded by Dr. G. E. Shuttleworth. Princess Christian has been pleased to accept the post of patroness of the association. Sir William Chance has

succeeded Mr. W. H. Dickinson, M.P., as chairman of the executive committee and the medical consulting staff has been reinforced by the accession of several provincial physicians who are interested in the care of defective children. The offices of the association are at 72, Denison House, Vauxhall Bridge-road, London, S.W.

THE ASSOCIATION OF HEAD MISTRESSES.—The following resolutions, which were carried unanimously at a meeting of members of this association who are members of local education committees on June 8th, were unanimously adopted at the annual conference of the association on June 9th, viz.:—

1. That it is desirable that a better standard, both intellectual and physical, be required for scholars passing from elementary into secondary schools.
2. That the Board of Education be asked to urge the local authorities to have a medical inspection by their own officer of all successful candidates for scholarships before the scholarships be finally awarded.

ST. THOMAS'S HOSPITAL.—Professor William Osler, in the course of his address to the medical students at St. Thomas's Hospital, London, on June 27th, when he presented the prizes to the successful candidates, touched on several subjects of interest to the medical profession. He observed that St. Thomas's Hospital was one of the first to establish a clinical laboratory and, referring to the active development of research work, he maintained that fully to establish the ideal of hospital efficiency they ought to call to their aid that form of research work which made science its servant. He especially emphasised the importance of hospitals in regard to the prevention of disease as well as the relief of suffering. He also dealt at some length with that thorny subject, the attachment of paying wards to hospitals. He spoke in favour of the movement, urging his experiences in connexion with such a procedure at the Johns Hopkins Hospital, where he was physician for 17 years, in support of his view.

HEALTH AND SANITATION IN MEXICO.—Mr. W. G. Max Müller, His Britannic Majesty's Chargé d'Affaires at Mexico, in his annual report to the Foreign Office, states that the latest sanitary statistics published for the whole of the Republic refer to the year 1902 and give the mortality as 478,926 4999 deaths were in that year attributed to typhus fever and 28,116 to small-pox. Special weekly returns are issued by the Board of Health as to the prevalence of yellow fever but are often incomplete. So far as the returns go, however, they show 451 cases and 120 deaths in 1904 and 204 cases and 96 deaths in 1905. In both these years the month in which the greatest number of cases and deaths occurred was October and the three principal centres of infection were Vera Cruz, Progreso, and Tehuantepec. Yellow fever is limited to the coast and never reaches the high central plateau. An energetic campaign is being waged with a view to extirpate this terrible disease entirely and much has already been accomplished towards preventing the recurrence of anything like an epidemic. In Vera Cruz, on account of its importance as a port, special efforts have been made to eradicate the disease and thus to prevent the imposition of quarantine against arrivals from there. A new port has been built, a large tract of low-lying swamps has been reclaimed, and new sewage works are under construction. Notwithstanding the primitive system of drainage existing in most of the towns of the Republic, epidemics of a serious nature, such as plague, cholera, and so on, are practically unknown. Even when such diseases are imported from foreign countries, the measures taken seem effectually to prevent their spread. Proper systems of drainage are being introduced into some of the larger towns and especially in the city of Mexico. It is only in the poorest part of the city, inhabited by the Indians, that the drains are not completed and there has been quite a severe outbreak of typhus fever in that quarter during the past winter. From the beginning of the epidemic on Oct. 1st, 1905, up to March 31st, 1906 there had been a total of 2736 cases and 637 deaths. During the month of March alone there were as many as 860 cases and 150 deaths. Towards the end of April, however, when Mr. Max Müller despatched his report, there were signs of improvement. The mortality of the Federal district is startling when compared with the death-rates of London, Buenos Ayres, Paris, Berlin, Amsterdam, New York, or even such a reputedly unhealthy city as Madrid. The deaths per 1000 in 1901 were 54; in 1902, 50; in 1903, 48; in 1904, 46; and in 1905, 56. The heaviest toll of death is taken from the poor but the returns show that the greatest mortality does not come from diseases directly dependent on the hygienic conditions surrounding the victims but from diseases attributable to the rarefaction of the atmosphere and the sudden climatic changes, and also to insufficient and unwholesome food and drink and too light clothing. The only contagious diseases at all prevalent are small-pox and typhus fever and the victims in nearly all cases belong to the lower classes. The deaths from pulmonary tuberculosis were 1360 in 1903, 1359 in 1904, and 1849 in 1905. The deaths from bronchitis in the same years were 1048, 1112, and 1365, and from pneumonia 3479, 3039, and 3775, whilst diarrhœa and enteritis were responsible in the three several years for 4314, 3992, and 5201 deaths. In 1904 there were 6041 deaths of children under one year of age and 4146 of children under four years. The population of the Federal district according to the census of 1900 was 541,478.

DONATIONS AND BEQUESTS.—Mr. William Henry Amyot of Newcastle has by will left £500 to the Newcastle-upon-Tyne Royal Infirmary.—By the will of Mr. F. J. Claudet of Hampstead, London, and of Cannes, France, £500 are left to the Hampstead General Hospital, £300 to Mount Vernon Hospital for Consumption, £200 to King Edward's Hospital Fund, £100 to the Great Northern Central Hospital, and £100 to the London Fever Hospital.—Mrs. Sarah Cosh has bequeathed £1000 to the Mount Vernon Hospital.—Under the will of Mr. Edward Northway Batt the Royal Berkshire County Hospital will receive £1000 and the Newbury District Hospital £1500.—The Warneford, Leamington, and South Warwickshire Hospital will receive £1000 under the will of Major John Marsland of Leamington.—The National Hospital for the Paralysed and Epileptic, Bloomsbury, has received a donation of £100 from the Goldsmiths' Company, £52 10s. from the Mercers' Company, and £25 from "D. J." "in grateful recollection of the skill and attention of one formerly a nurse at the hospital." "D. J." has also become an annual subscriber to the Nervous Diseases Research Fund.

THE POOR-LAW MEDICAL OFFICERS' ASSOCIATION OF ENGLAND AND WALES.—The annual dinner of this association was held in the Oak Room of the Trocadéro Restaurant, London, on June 26th, the President of the association, Surgeon-General G. J. H. Evatt, being in the chair. Dr. G. A. Heron, in proposing the toast of "The Association," drew attention to the political impotence of the medical profession. The honorary secretary of the association, Dr. M. Greenwood, in acknowledging this toast, said that considerable attention had been given by the council of the association to the proceedings of the Royal Commission on the Poor-laws now sitting and an attempt was being made to bring the following grievances before that Commission: (1) The grave injury likely to accrue to the sick poor owing to the inadequacy of the remuneration of medical officers in many parts of the country, especially in rural districts; (2) the danger threatened to the lying-in poor in consequence of the difficulty so often experienced in obtaining a midwifery order when the issue of such order might enable the medical officer to claim the usual and proper fee; and (3) the suffering entailed on the poor owing to the existence of no provision under the Poor-law to obtain the services of an anæsthetist where operative measures are necessary, especially in difficult midwifery cases. Those three points had been selected as the most practical and he had been appointed to represent the association before the Commission. He would be obliged if members would send him any details of cases bearing on those points in order to lay them before the Royal Commission not later than the end of June. He then related how the council of the association had dealt with the case of a non-resident district medical officer, who after many years' service, when his superannuation was getting near, was not re-elected by his board. Application was made to the Local Government Board but failing to obtain redress Sir Walter Foster put a question to the President in the House of Commons. The grievance was admitted but a "non possumus" was the only answer elicited. Although nothing beyond a return of payments made towards the superannuation fund was gained in the case public attention had been drawn to the matter and it was pointed out how a change in the Poor-law orders might readily prevent such gross injustice in the future. The toast of "Our Guests" was proposed by the President and it was acknowledged by Mr. Andrew Clark and Dr. F. de Havilland Hall. Mr W. Holder submitted the toast of "The

President" and this having been suitably responded to the proceedings of the evening concluded.

A MORTUARY FOR BRIDGWATER.—On June 21st the Mayor of Bridgwater (Somerset) formally opened a new mortuary which has been erected by the corporation of that town.

MEDICAL MAGISTRATES.—The name of Mr. George Locke, M.R.C.S. Eng., L.R.C.P. Edin., has been placed upon the commission of the peace for the county borough of Hastings.—Mr. Ptolemy Augustus Colmer, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., of Yeovil, has been placed on the commission of the peace for the county of Somerset.

METROPOLITAN PROVIDENT MEDICAL ASSOCIATION.—A meeting of this association was held at 42, Grosvenor-gardens, London, on June 21st, Mr. F. Buxton being in the chair. The objects of this association are to provide upon principles of mutual assurance (by means of small periodical payments) efficient medical treatment and medicine for those members of the working-classes and their families who are unable to pay the ordinary medical fees; to coöperate with the governing bodies of the metropolitan hospitals in order that they may be relieved of the large number of ordinary cases of illness that at present overcrowd their out-patient departments; and also to have referred to them from the provident dispensaries cases which require special hospital treatment and nursing or are suitable for clinical instruction. These objects are attained by the formation in suitable districts of provident dispensaries as branches of the association which are under the management of local committees and to which the local medical practitioners are invited to attach themselves. The chairman, in moving the adoption of the report, pointed out that the association encouraged thrift and independence. There were now 21 branches of the association—16 dispensaries and five medical clubs—having a membership roll of 12,386 cards, family and single. The receipts from the provident members in 1905 were £5240 6*s.* 7*d.*, or, including Hospital Saturday Fund payments, £5496 16*s.* 7*d.* Of this amount, the medical officers received £3279 3*s.* 10*d.*, making, with the sums expended on dispensers and drugs, a total of £4841 15*s.* 6*d.* devoted to the medical part of the work, or 88 per cent. of the above income. Mr. Victor Cavendish seconded the motion and the report was duly adopted. Sir William S. Church then proposed the following motion, which was seconded by Mr. H. A. Harben, supported by Dr. Lauriston E. Shaw, and duly carried:—

That it is expedient that provident dispensaries working in coöperation with the hospitals, under rules generally approved by the medical profession, be formed in every district of the metropolis, and that funds for the creation of such dispensaries where they do not yet exist and their maintenance until they reach self-support are urgently needed by the Metropolitan Provident Medical Association which has already established 21 branches and provides medical attendance for considerably more than 30,000 persons.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Poisons and Pharmacy Bill.

A LARGE number of petitions are being presented to the House of Commons praying for amendments in the Poisons and Pharmacy Bill which the Government has succeeded in passing through the House of Lords. One was presented the other day by Mr. WINSTON CHURCHILL, from several physicians and surgeons in Lancashire, and as it summarises the points of most of the other petitions a few extracts from it may be of interest. It is pointed out that with most of the provisions of the Poisons and Pharmacy Bill as at present drafted the petitioners are in entire accord but they urge that it may be amended in such a manner as to insure that the public generally shall have no readier access to poisons than they have at the present time. Whilst fully recognising the desirability of those who require to use poisonous substances in horticulture and agriculture being able to procure them without difficulty the petitioners urge that there should be provision in the Bill that no licence to deal in such poisonous substances should be granted to any other person than a registered chemist when such person is within reasonable distance of the probable purchaser. It is also considered to be undesirable that corporate companies which carry on business under the limited liability system should be permitted to describe themselves by any title which is already a statutory title obtainable by individuals only after examination and registration. The title "chemist" is a personal one and for nearly 40 years has had a definite statutory meaning both to the public and to the medical and allied professions and the petitioners believe that businesses conducted upon premises where the statutory title is exhibited should be controlled only by qualified individuals. It is submitted therefore alike on the ground of protection of the public and also in order that the individual pharmacist may be encouraged to qualify himself as efficiently as possible for the important functions that are dealt with in the Poisons and Pharmacy Bill, that the Bill should be so amended as to maintain for the public the protection of a responsible body of persons who are easily and unmistakeably recognised by their statutory titles.

Select Committee on Juvenile Smoking.

The Select Committee of the House of Lords appointed to consider the Juvenile Smoking Bill and also the whole question of juvenile smoking in its bearing on the physical condition of children, commenced hearing evidence on Tuesday last, June 26th. Earl BEAUCHAMP presided over the committee and among those who gave evidence were Sir WILLIAM BROADBENT and Professor SIMS WOODHEAD.

HOUSE OF COMMONS.

THURSDAY, JUNE 21ST.

Domestic Workshops as Sleeping Apartments.

Mr. ARTHUR HENDERSON asked the Secretary of State for the Home Department whether he had any official information showing that the number of domestic workshops in the clothing trades used as sleeping apartments was increasing; and, if so, whether he would consider the advisability of using the powers conferred by Section 3 of the Factory Act, 1901, for the purpose of substantially increasing the cubic space required in such places.—Mr. GLADSTONE answered: I am afraid I have no official information on this subject, nor should I have any power to deal with the matter under Subsection 3 of Section 3 of the Factory Act, as domestic workshops are expressly excluded from the operation of that provision. I may point out, however, that any house or part of a house so overcrowded as to be injurious to the health of the inmates constitutes a nuisance under the Public Health Act with which the local authority has full power to deal.

Tinned Meats in Irish Institutions.

Mr. HALPIN asked the Chief Secretary to the Lord Lieutenant of Ireland whether, considering the facts that had come to light regarding imported tinned meats, and the danger attaching to the use of the same, he would give instructions to all the public institutions under his control to discontinue the use of the said meats, which was one of the chief causes of the abnormal death-rate from consumption in the British Isles and the spreading of diseases unknown before the establishment of the foreign tinned meat trade.—Mr. BRYCE replied: Without offering an opinion upon the point raised in the concluding part of the question, I may inform the honourable Member that tinned meats are not used in Irish prisons. The management of district lunatic asylums is vested in committees of the county councils and I am informed that tinned meats do not appear in any of the fixed dietary scales of those institutions. As regards workhouses, the Local Government Board is of opinion that boards of guardians in Ireland may safely be relied upon to take proper precautions as to the use of tinned meats, but as a matter of fact this class of food is not used to any appreciable extent in Irish workhouses.

MONDAY, JUNE 25TH.

Consumption in Ireland.

Sir THOMAS ESMONDE asked the Chief Secretary to the Lord Lieutenant of Ireland whether, in view of the spread of consumption in Ireland, the Government would consider whether any steps could be taken for dealing with the disease.—Mr. BRYCE answered: This matter has been receiving the serious consideration of the Local Government Board, which is issuing to local authorities and medical officers of health circulars containing recommendations and instructions as to measures designed to check the spread of consumption.

TUESDAY, JUNE 26TH.

The Royal College of Science.

Sir WILLIAM COLLINS asked the President of the Board of Education whether he could now state what action he proposed to take on the report of the Departmental Committee on the Royal College of Science, &c.; and whether any reorganisation of the University of London was contemplated with a view to the association with it of the proposed Technological College.—Mr. BIRRELL replied: The Board is at present engaged in the preparation of a scheme for the establishment of a new institution on lines corresponding as closely as possible with those recommended by the Departmental Committee. The Board agrees with that committee in regarding it as of first importance that there should be no delay in the organisation of the institution, and with the recommendation of the committee that its relation to the University of London should in the first instance be that of a "school of the University," a recommendation in which the Senate of the University has informed the Board that it concurs. In considering the constitution of the new institution the Board has had under consideration the suggestion of the Departmental Committee (No 94, p. 27) that, without delaying the commencement of the new institution's work, a Royal Commission should be appointed to consider whether changes could advisedly be made in the character and constitution of the University which might make it desirable and possible to amalgamate the two institutions. It has also had before it the resolution of the Senate of the University deprecating the appointment of such a Royal Commission within so short a period after the reorganisation of the University and expressing the desire that opportunity should be afforded for conference between the Board and the Senate as to any changes of the kind suggested. In the course of the conference which took place on March 9th between the Board of Education and a deputation from the University

Senate upon these matters the suggestions thrown out by the University deputation seemed to be contingent practically upon the incorporation of the new institution within the University. As this would necessitate a prolonged delay in the starting of the institution which the committee specially recommended should be avoided, the Board has found it impracticable to proceed on those lines but is hastening as much as possible the preparation of a draft charter on the lines of the report of the Departmental Committee.

Consumption in Ireland.

MR. VINCENT KENNEDY asked the Chief Secretary to the Lord Lieutenant of Ireland whether he had received a pamphlet from the Ulster branch of the National Association for the Prevention of Consumption in Ireland setting out that in the last 30 years the death-rate from consumption per 10,000 of the population had fallen in England from 24 to 12, while in Ireland the death-rate from this preventable disease had risen from 19 to 22 per 10,000 of the population and that annually nearly 13,000 people died in Ireland from this disease; whether this sacrifice of life was having the attention of the Government; and whether the whole matter would be immediately dealt with by legislation or otherwise.—MR. BRYCE said, in reply: I have received the pamphlet referred to. The figures are substantially, though not precisely, as stated. The fall in England during the past 30 years was from 21 (not 24) to 12 per 10,000. The rise in Ireland was from 18 (not 19) to 22. The Local Government Board is about to issue circulars to local authorities and medical officers of health containing recommendations and instructions as to the means to be adopted to check the spread of consumption. The subject has been receiving, and will continue to receive, the careful consideration of the Government.

BOOKS, ETC., RECEIVED.

AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION (Secretary: Dr. CHARLES W. PILGRIM, Ploughkeepsie, N.Y.).

Proceedings of the American Medico-Psychological Association at the Sixty-first Annual Meeting, held in San Antonio, Texas, April 18–21, 1905. Price not stated.

BAILLIÈRE, TINDALL, AND COX, 8, Henrietta-street, Covent Garden, London, W.C.

Manual of Anatomy, Systematic and Practical, including Embryology. By A. M. Buchanan, M.A., M.D., C.M., F.F.P.S. Glasg., Professor of Anatomy in Anderson's College, Glasgow, Examiner in Anatomy for the Triple Qualification of the Scottish Licensing Bodies, Examiner in Anatomy and in Physiology for the Dental Diploma, and Examiner in Anatomy (Human and Comparative) for the Fellowship of the Faculty of Physicians and Surgeons of Glasgow. Vol. I., Osteology; Upper Limb; Lower Limb. Price 12s. 6d. net. (Vol. II., completing the work, will be published in September.)

Student's Handbook of Operative Surgery. By William Ireland de C. Wheeler (Mod.), B.A., M.D. (Dub. Univ.), F.R.C.S., Surgeon to Mercer's Hospital. Price 5s. net.

Phlebitis and Thrombosis. The Hunterian Lectures delivered before the Royal College of Surgeons of England in March, 1906. By Warrington Haward, F.R.C.S. Eng., Hunterian Professor of Surgery and Pathology in the Royal College of Surgeons of England, Consulting Surgeon to St. George's Hospital; President of the Royal Medical and Chirurgical Society. Price 5s. net.

Lectures on Midwifery for Midwives. By A. B. Calder, M.B., M.R.C.S., Lecturer on Midwifery to London County Council, to St. Mary's Midwifery Training School, Fulham, to St. Clement's Maternity Home, Fulham, &c. Price 5s. net.

A Manual of Veterinary Therapeutics and Pharmacology. By E. Wallis Hoare, F.R.C.V.S., Examiner in Anatomy, Royal College of Veterinary Surgeons. Second edition. Price 15s. net.

BRIMMELL'S PRINTING WORKS, Oxton-road, Birkenhead.

Health Talks about Children. (An Appeal for the Child.) By John Grimshaw, M.D., B.S. Lond., D.P.H. Camb., M.R.C.S. Eng., &c. Price 1s. net. (Postage 2d.)

CELTIC PRESS, 38, Chancery-lane, London, W.C.

Surdus in Search of His Hearing. An Exposure of Aural Quacks. By Evan Yellon ("Paistin Fionn"). Illustrated by F. M. Cooper. Price 2s. 6d.

KEGAN PAUL, TRENCH, TRÜBNER, AND CO., LIMITED, Dryden House, 43, Gerrard-street, Soho, London, W.

Lucem Sequor and Other Poems. By Maria Eleanor Vere Cust, F.R.G.S. Price 2s. 6d. net.

Thoughts for Quiet Moments. Short Poems. By Jessie M. Price. Price 2s. 6d. net.

LAURIE, T. WERNER, Clifford's Inn, Fleet-street, London, E.C.

The Life of Oscar Wilde. By Robert Harborough Sherard. Price 12s. 6d. net.

J. B. LIPPINCOTT COMPANY, Philadelphia and London.

Consumption: Its Relation to Man and his Civilisation, its Prevention and Cure. By John Bessner Huber, A.M., M.D., Fellow of the New York Academy of Medicine, Member of the National Association for the Study and Prevention of Tuberculosis, Visiting Physician to St. Joseph's Hospital for Consumptives, Member of the Advisory Board, the New Mexico Cottage Sanatorium, &c. Price 15s. net.

MCDOUGALL'S EDUCATIONAL CO., LIMITED, 8, Farringdon-avenue, London, E.C., and 1, St. James-square, Edinburgh.

McDougall's Health Reader. Price 6d. net.

METHUEN AND CO., 36, Essex-street, Strand, London, W.C.

Principia Therapeutica. By Harrington Sainsbury, M.D., F.R.C.P., Fellow of the Physiological Society, Physician to the Royal Free Hospital, and to the City of London Hospital for Diseases of the Chest, Victoria Park. Price 7s. 6d. net.

OFFICE OF THE SUPERINTENDENT OF GOVERNMENT PRINTING, Calcutta, India.

Report on Epidemic Cerebro-spinal Meningitis in India. By Captain C. J. Robertson-Milne, M.B., I.M.S., on special duty. Price Rs. 1, or 1s. 6d.

Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. No. 23. The Anatomy and Histology of Ticks. By Captain S. R. Christophers, M.B., I.M.S. Price Rs. 3, or 4s. 6d.

PROBSTHAIN AND CO., 14, Bury-street, London, W.C.

The Revival of Aristocracy. By Oscar Levy. Translated by Leonard A. Magnus. Price 3s. 6d. net cash.

SCIENTIFIC PRESS, LIMITED, 28 and 29, Southampton-street, Strand, London, W.C.

The Care of Children. Practical Hints for Mothers and Nurses at Home and Abroad. By Robert J. Blackham, D.P.H. Lond., Captain, Royal Army Medical Corps, Examiner, St. John Ambulance Association, Member of the Honourable Society of the Middle Temple, Fellow of the Obstetrical Society, Fellow of the Incorporated Society of Medical Officers of Health. Revised and enlarged edition. Price 1s. 6d. net.

SWEET AND MAXWELL, LIMITED, London.

Trial of Eugène Marie Chantrelle. Edited by A. Duncan Smith, F.S.A. (Scot.), Advocate. Price 5s. net.

UNWIN BROTHERS, LIMITED, 27, Pilgrim-street, London, E.C.

Universal Steamship Guide. For Passengers from Every Port. 1906–1907. Price 10s. net; or with copy, post free monthly, of "The World's Carriers," containing monthly lists of sailings of passenger and freight steamers, 12s. 6d. per annum.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BIRKS, F. J., M.B. Lond., L.S.A., has been appointed Honorary Anæsthetist to the Dental Department of the Leeds Public Dispensary.

CROLL, W. F., M.D. Aberd., has been appointed Medical Examining Officer to the Steam Fishers' Provident Society, Aberdeen.

DEANE, JOHN EDWARD JAMES, L.K.Q.C.P. Irel., has been appointed Officer of Health for Eaglehawk Borough, *pro tem.*, and Public Vaccinator for the Northern District, Victoria, Australia.

EDWARDS, FRANK PAYNE, M.B., B.C. Cantab., has been appointed Public Vaccinator to the North-Western District of Victoria, Australia.

GRAHAM, CECIL I., F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Surgical Registrar to St. Mary's Hospital, Paddington.

HARRISON, P. B., M.R.C.S., L.R.C.P. Lond., has been appointed Resident Medical Officer at the Leeds Public Dispensary.

JOHNSON, L. CAPPER, M.B. Lond. and Vict., Ch.B. Vict., M.R.C.S., L.R.C.P. Lond., has been appointed Honorary Anæsthetist to the Surgical Department of the Leeds Public Dispensary.

JORDAN, ALFRED C., M.D. Cantab., has been appointed Medical Officer to the Roentgen Ray Department of the Royal Hospital for Diseases of the Chest, City-road.

KENNEDY, J. C., M.B., B.S. Melb., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

LYONS, ALEXANDER, L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Officer of Health for the Kowree Shire, North Riding of Victoria, Australia.

MOORE, C. A., M.B., B.S. Lond., M.R.C.S., L.R.C.P. Lond., has been appointed Senior Resident Medical Officer at Sheffield Union Hospital.

SALMON, ARTHUR GUY, M.D., B.S. Lond., L.R.C.P. Lond., M.R.C.S., L.S.A., has been appointed Medical Officer of Health for the Bodmin (Cornwall) Rural District.

SOLTAU, ALFRED BERTRAM, M.D. Lond., F.R.C.S., L.R.C.P. Lond., has been appointed Honorary Physician to the Plymouth Public Dispensary.

STOCKWELL, G. E. ST. CLAIR, M.B., B.C. Cantab., has been appointed Clinical Assistant to the Leeds Public Dispensary.

WARDLEWORTH, D., M.B., Ch.B. Vict., has been appointed Junior House Surgeon at the Salford Royal Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRMINGHAM, QUEEN'S HOSPITAL.—Honorary Surgeon.

BRIGHTON THROAT AND EAR HOSPITAL, Church-street, Queen's-road.—Non-resident House Surgeon for six months, renewable. Salary at rate of £75 per annum.

BURNLEY, VICTORIA HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with residence, board, and washing.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House Physician for six months. Salary at rate of £50 per annum, with board, residence, &c.

DERBYSHIRE ROYAL INFIRMARY.—Honorary Surgeon.

EGYPTIAN GOVERNMENT, MINISTRY OF EDUCATION.—Professor of Midwifery and Gynæcology. Salary £400 a year. Also Medical Tutor and Registrar to Kasr-el-Ainy Hospital. Salary £400 a year.

PRIMLEY, BROMPTON HOSPITAL SANATORIUM.—Assistant Medical Superintendent. Salary £100 per annum, with board, lodging, attendance, and washing.

HAMBLEDON, Surrey.—Medical Officer of Health. Salary at rate of £100 per annum.

HAMMERSMITH INFIRMARY, Ducane road, Wormwood Scrubs, W.—Assistant Medical Superintendent. Salary at rate of £120 per annum, increasing to £150, with board, apartments, washing, and attendance.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Physician, unmarried, for six months. Salary £20, with board and residence. Also Assistant Casualty Medical Officer, unmarried, for six months. Salary £20, with board and residence, &c. Also House Surgeon, unmarried, for six months. Salary £20, with board and residence. Also Radiographer.

HUDDERSFIELD INFIRMARY.—Junior House Surgeon. Salary £50 per annum, with board, residence, and washing.

HULL, ROYAL INFIRMARY.—Casualty House Surgeon. Salary £50 per annum, with board and lodging.

LANCASTER, COUNTY LUNATIC ASYLUM.—Assistant Medical Officer, unmarried. Salary £150 per annum, increasing to £250, with board, lodging, and washing.

LIVERPOOL STANLEY HOSPITAL.—Lady Honorary Medical Officer for Women's Diseases.

NEWCASTLE, Co. WICKLOW, ROYAL NATIONAL HOSPITAL FOR CONSUMPTION.—Medical Officer and Assistant. Salaries £100 and £50 per annum respectively, with board and lodging.

NOTTINGHAM WORKHOUSE INFIRMARY.—Resident Medical Officer, unmarried. Salary £130 per annum, with apartments, board, washing, and attendance.

OXFORD, LITTLEMORE PAUPER LUNATIC ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £150 per annum, with rooms and board.

PLYMOUTH, SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Assistant House Surgeon for six months, renewable. Salary at rate of £50 per annum, with board, residence, and washing.

ROYAL EAR HOSPITAL, Dean-street, Soho, London, W.—Clinical Assistants.

RYDE, ROYAL ISLE OF WIGHT COUNTY HOSPITAL.—Honorary Ophthalmic Surgeon.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck-street, Cavendish-square.—Honorary Surgeon.

STOCKPORT INFIRMARY.—Junior Assistant House Surgeon for six months. Salary at rate of £40 per annum, with board, washing, and residence.

WANDSWORTH UNION INFIRMARY, St. John's-hill.—Junior Assistant Medical Officer, unmarried, for six months. Salary at rate of £100 a year, with board, lodging, and washing.

WEST HAM INFIRMARY, Whipps Cross-road, Leytonstone, N.E.—Junior Assistant Medical Officer. Salary £140 per annum, rising to £160, with residential allowances.

WOKINGHAM, BERKS, LONDON OPEN-AIR SANATORIUM, Pinewood.—Assistant Medical Officer. Salary £100 per annum and all found.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House Surgeon. Salary £70 per annum, with rooms, board, and washing.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Strathmiglo, in the county of Fife; at Rochford, in the county of Essex; and at Thrapston, in the county of Northampton. There will also be a vacancy at Annan, in the county of Dumfries, on August 1st.

Births, Marriages, and Deaths.

BIRTHS.

LAWSON.—On June 19th, at Moy, Steyning, Sussex, the wife of Frank Howard Lawson, M.R.C.S. Eng., L.R.C.P. Lond., of a daughter.

PAIN.—On June 22nd, at Lynvale-villas, Lyncombe, Bath, the wife of Basil H. Pain, M.B., M.R.C.S., of a daughter.

SERPELL.—On June 18th, at Cross-park, Plymouth, the wife of H. Hamilton Serpell, L.R.C.P., M.R.C.S., of Polyphant, Lewannick, Launceston, Cornwall, of a son.

MARRIAGES.

BEVIR—THOMAS.—On June 21st, at Timberscombe, Dunster, George Bevir, M.R.C.S., L.R.C.P., of Timsbury, Bath, to Annie (Nancy), second daughter of the late J. Ashlin Thomas and of Mrs. Thomas.

PARTRIDGE—FORBES.—On June 20th, at the parish church, Mickleham, Surrey, Lionel Strowd Partridge, B.A., M.R.C.S., L.R.C.P., to E. M. (Lily), only daughter of William Forbes, of Casa Giglio, Alassio.

PERIGAL—FOX.—On June 20th, at St. James's, Paddington, Arthur de St. Leu F. Perigal, M.D., to Constance Adeline, only daughter of William A. Fox, L.R.C.S.E.

DEATHS.

DRYLAND.—On June 24th, at Kettering, John Winter Dryland, M.R.C.S., L.S.A., L.M., J.P., in his 73rd year.

DUKES.—On June 19th, at University College Hospital, London, by accident, Lawrence Dukes, M.A., M.B., B.Ch. Cantab., third son of Clement Dukes of Rugby, aged 25 years.

HILLS.—On June 23rd, at Cawnpore, of cholera, Walter Hyde Hills, M.B. Camb., R.A.M.C.

STOTT.—On June 24th, at Highgate-road, N.W., Thomas Sibley Stott, M.R.C.S., L.S.A., in his 64th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

ADVERTISEMENTS AND IRRELEVANT REPLIES.

THE following advertisement was inserted in a recent issue of THE LANCET:—

> DISPENSER (qualified) wanted by a general practitioner in a provincial town. Salary, out-door, to commence at £90, to be increased in a few months to £100 per annum to a suitable and capable man.—Address, No. 877, THE LANCET Office, 423, Strand, W.C.

And as a result we have received from the advertiser a letter in which he says that he believes that the advertisement has secured for him a suitable man. His letter then proceeds as follows:—

> "But, oh dear, dear, those ubiquitous women!! Although I said 'man,' I had *nine* applications from women! Some of them seemed to have noticed the word 'man' and yet wrote as though they were quite equal, if not superior, to any *man*. I am thankful I didn't put in my address as I fear my dispensership if not myself would have been taken by storm. A nice thing, indeed, an *old* bachelor engaging a female dispenser! What *would* Mrs. Grundy have to say? Could you put in a word or two in your paper to stop this annoyance?"

We all know that the struggle for life is keen among educated young women—the militant "suffragette" is an expression of this keenness—but the tactics displayed by the ladies who answered the advertisement in our opinion were unwise. Nothing could come of them for nothing aggravates an advertiser more than to receive replies from people whose applications the wording of his advertisement was intended to exclude. Those who reply to advertisements never seem to understand this, and the lady dispensers only sinned as most of the public, with anything to sell or let, always sin. We advertise for a seaside cottage and replies come from inland health resorts to point out that better air is provided in such localities than at any coast resort. We advertise for a house in Cornwall or Hampstead and receive offers of bargains in Aberdeen or Sydenham. We advertise for a private secretary and a masseur or a chauffeur is bound to be among the applicants. We trust that the ladies who do us the honour to be our subscribers, or to consult our columns, will remember that advertisers feel natural annoyance at receiving a number of perfectly irrelevant replies.

A DISPENSER WANTED.

THE parish of Hammersmith is in want of a dispenser at the infirmary and a statement to this effect appears in the supplement to the *Chemist and Druggist* of June 23rd. The advertisement says that no candidate is qualified for the post "unless he or she is a Licentiate of the Society of Apothecaries of London or holder of a certificate of that Society as to his qualification to act as an assistant in compounding medicines, or is a compounder of medicines duly qualified in accordance with the regulations for the Army Medical Staff Corps, or has been duly registered under the Pharmacy Act, 1868, or has been duly registered under the Pharmacy Act (Ireland), 1875, and the Pharmacy Act (Ireland), 1875, Amendment Act, 1890, as qualified to compound medical prescriptions. The salary will be at the rate of £90 per annum, with an allowance of two meals daily in addition." It seems to us that this is a badly worded advertisement. Licentiates of the Society of Apothecaries of London are fully qualified members of the medical profession and are not likely to become dispensers. No doubt they are eligible for such a post, and presumably the same may be said for the F.R.C.S. or M.D., but in the natural course of events they will not compete for the post, so that mention of their fitness is unnecessary and therefore unfortunate.

CLOSETS IN CORRIDOR CARRIAGES.

To the Editors of THE LANCET.

SIRS,—The risks to health of the present system of closets on corridor carriages are so obvious that it seems incredible it should be allowed to continue. It is obvious that all fæcal matter deposited on the railway track or adhering to the under surface of the carriage is sooner or later reduced to dust by the current of air. Hence poisonous germs may be inspired by the passengers, may settle on the food in the restaurant car, or on milk, fruit, &c., in the course of transit. This is obviously a question that needs attention by the sanitary authorities who are responsible for the health of the travelling public.

I am, Sirs, yours faithfully,

Torquay, June 26th, 1906. H. H. TIDSWELL.

DENATURISED ALCOHOL.

THE *Scientific American* of June 9th states that the recent passage by the American Congress of the Bill to remove the tax on alcohol for technical uses is expected to prove of great value to many industries. Full information with respect to German methods of denaturising is supplied in various reports made by Mr. Mason, formerly American Consul-General in Berlin. He says that there are two general classes or degrees of denaturising—namely, the "complete" and the "incomplete"—according to the purposes for which the alcohol is to

be ultimately used. For the complete denaturisation of alcohol by the German system there are added to every 100 litres (26½ gallons) of spirits, either (1) two and a half litres of the "standard denaturiser," made of four parts of wood alcohol and one part of pyridin (a nitrogenous base obtained by distilling bone oil or coal tar), with the addition to each litre of 50 grammes of oil of lavender or rosemary; or (2) one and a quarter litres of the above "standard" and two litres of benzol. During the year 1903 there were used in Germany 4 931,406 hectolitres of alcohol treated by the first process and 52,764 hectolitres treated by the second process. For incomplete denaturisation i.e., sufficient to prevent alcohol from being drunk but not to disqualify it for various special purposes for which the wholly denaturised spirits would be unavailable—there are added to each 100 litres of spirits either five litres of wood alcohol, or half a litre of pyridin, or 20 litres of a strong solution of shellac, or a kilogramme of camphor, or two litres of oil of turpentine, or half a litre of benzol. Alcohol to be used in the manufacture of ethers, aldehyde, collodion, salicylic acid and its salts, and for a number of other purposes is denaturised by adding to 100 litres of spirits either ten litres of sulphuric ether, or one litre of benzol, or half a litre of oil of turpentine, or 0·025 litre of animal oil.

A HUMAN OSTRICH.

AT a recent inquest at Islington it was stated that the deceased, a man, 34 years of age, had been earning a livelihood by visiting various towns and in market places and outside public-houses eating glass and swallowing hatpins and nails. On April 11th he was admitted to Islington workhouse infirmary in a very emaciated condition and he died two months later. On post-mortem examination over 30 hatpins and nails were found in his body, the cause of death being exhaustion from gastritis and peritonitis. The jury returned a verdict of "Death from misadventure." These are the episodes that make thoughtful people wonder. The dense ignorance shown by the unfortunate man and by those who have been responsible for his death by paying for his suicidal performances during life passes understanding.

THE ASCLEPIEUM AT COS.

IN Herr Herzog's final summary of his excavations at the Asclepieum at Cos, having a knowledge of all its inscriptions as well as edifices, he considers it and the worship of the god there to have been founded by immigrants to the island from Thessaly and that the great temple and the sanatorium lower down the hill were erected in the third century B.C. The many additions of porticos, colonnades, terraces, and chambers were built at various times down to the Roman Imperial period when much splendour was bestowed on the site by the physician Xenophon, murderer of the Emperor Claudius. The inscriptions indicate that the system of medicine was more scientific and less magical than in many shrines of Asclepios elsewhere.

"ETHOL."

Messrs. Parke, Davis, and Co., of 111, Queen Victoria-street, Lond n, E.C., have submitted to us under the above name a sample of liquid soap, the properties of which will interest all those who have occasion to realise the difficulty of removing the stubborn grime and grease incident to motoring, cycling, &c. The soap does its work most satisfactorily and expeditiously and is very convenient to use. This is an age of locomotion and consequently an age of lubricants and the risks of soiling the hands and clothing with black grease are common enough. It will be a comfort, therefore, to many to know that this soiling need not be indelible when "ethol" is at hand.

THE STERILISATION OF DRINKING WATER BY IODINE.

WE have received from Messrs. Evans, Sons, Lescher, and Webb, of 60, Bartholomew-close, London, E.C., a set of tablets suitable for rapidly sterilising drinking water by means of iodine. There are three tablets in all. Tablet A contains potassic iodide and iodate, tablet B citric acid, and tablet C sodium sulphite. Tablets A and B are first dissolved together in an ounce of water and the result is a solution of iodine which is added to four gallons of water, the whole being well stirred. The sterilisation of the water is thus effected and the next step is to remove the iodine, which is readily done by adding a tablet C. The salts left in the water are, of course, iodide and citrate of potassium and sodium sulphate, but the total original ingredients added to four gallons of water only weigh five and a half grains. They cannot be detected by the palate and the water so treated has a perfectly fresh taste. Bacteriological experiments have proved the efficacy of this simple and quick method and excellent results have accrued from the use of these tablets during the prevalence of water-borne disease in India. The method is obviously applicable on the small scale and soda-water may easily be sterilised in this way. Many other applications are suggested, as, for example, the sterilisation of serum, the preparation of aseptic water for use in surgical operations, and so on.

Eranum.—The operation is impossible for reasons that must be clear to anyone with a rudimentary knowledge of anatomy.

Medicus (London, N.E.) is requested to communicate his name and address.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (2nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (3 P.M.).

TUESDAY (3rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (2 P.M., Ophthalmic, 2.15 P.M.).

WEDNESDAY (4th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9.30 A.M., Dental, 2 P.M.).

THURSDAY (5th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (2.30 P.M.).

FRIDAY (6th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), St. Mark's (2.30 P.M.).

SATURDAY (7th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (3rd).—MEDICO-LEGAL SOCIETY (22, Albemarle-street, W.).—8.15 P.M.: Exhibition of Medico-legal Specimens. Adjourned Discussion on Reform in the Present Method of Ascertaining the Fact and Cause of Death (opened by Mr. J. Troutbeck). Mr. Justice Walton (President), Dr. W. W. Westcott, Prof. H. Littlejohn, and Dr. F. J. Smith hope to contribute.

WEDNESDAY (4th).—OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M.: Specimens will be shown by Dr. H. R. Spencer, Dr. H. R. Andrews Dr. Eden, and Dr. Foulerton. Short Communications:—Dr. C. N. Longridge: A Short Note on 64 Cases of Contracted Pelvis.—Dr. H. Williamson: A Case of Adenoma of the Labium Majus. Dr. A. Louise Mellroy: Demonstration with the epidiascope on Primary Cancer of the Ovary.

THURSDAY (5th).—NORTH-EAST LONDON CLINICAL SOCIETY (Tottenham Hospital, N.).—4 P.M. General Meeting.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (2nd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M.: Dr. W. Evans: Clinique. (Skin). 5.15 P.M.: Lecture:—Dr. E. G. Little: Some Parasitic Diseases of the Skin.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—2 P.M.: Medical and Surgical Clinics. 2.15 P.M.: X Rays. 2.30 P.M.: Operations. Diseases of the Eye. 5 P.M.: Lecture:—Mr. Bidwell: Surgical Treatment of Gastric Ulcer.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Sir D. Duckworth: Medicine. 3.15 P.M.: Mr. W. Turner: Surgery. 4 P.M.: Dr. StClair Thomson: Throat and Ear. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Ear and Throat.

CHARING CROSS HOSPITAL.—4 P.M.: Mr. T. Collins: Demonstration (Ophthalmological). (Post-Graduate Course.)

TUESDAY 3rd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Dr. G. Rankin: Clinique. (Medical.) 5.15 P.M.: Lecture:—Dr. D. Sommerville: Errors of Digestion in Relation to Disease.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—2 P.M.: Medical and Surgical Clinics. 2.15 P.M.: X Rays. Diseases of the Throat, Nose, and Ear. 2.30 P.M.: Operations. Diseases of the Skin. 5 P.M.: Lecture: Dr. Moullin: Anteflexion and Sterility.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. R. T. Hewlett: Medicine. 3.15 P.M.: Mr. Carless: Surgery. 4 P.M.: Mr. M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Skin.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M.: Clinical Lecture:—Dr. Beevor: Determination of Action of Muscles.

WEDNESDAY (4th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. M. White: Clinique. (Surgical). 5.15 P.M.: Lecture:—Dr. C. Watson (Edinburgh): Diet Therapy in the Light of Recent Research, with Special Reference to the Use of Animal Proteid Food (with lantern demonstration).

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Diseases of the Throat, Nose, and Ear. Diseases of Children. 2 P.M.: Medical and Surgical Clinics. 2.15 P.M.: X Rays. 2.30 P.M.: Operations. 5 P.M.: Lecture:—Dr. R. H. Cole: Medico-legal Relationships of Insanity.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. F. Taylor: Medicine. 3.15 P.M.: Mr. M. Robson: Surgery. 4 P.M.: Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 11 A.M.: Eye.

CENTRAL LONDON THROAT AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M.: Demonstration:—Dr. W. Wingrave: Pathology.

THURSDAY (5th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. Hutchinson: Clinique. (Surgical). 5.15 P.M.: Lecture:—Dr. C. Watson (Edinburgh): Diet Therapy in the Light of Recent Research, with Special Reference to the Use of Animal Proteid Food (with lantern demonstration).

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—2 P.M.: Medical and Surgical Clinics. 2.15 P.M.: X Rays. 2.30 P.M.: Operations. Diseases of the Eye. 5 P.M.: Lecture:—Mr. Baldwin: Practical Surgery.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. G. Rankin: Medicine. 3.15 P.M.: Sir W. Bennett: Surgery. 4 P.M.: Mr. M. Davidson: Radiography. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Ear and Throat.

CENTRAL LONDON THROAT AND EAR HOSPITAL (Gray's Inn-road, W.C.).—8 P.M. Clinical Evening.

CHARING CROSS HOSPITAL.—4 P.M.: Mr. Daniel: Demonstration (Surgical). (Post-Graduate Course.)

HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M.: Lecture:—Mr. Kellock: Deformities of the Long Bones.

ROYAL INSTITUTE OF PUBLIC HEALTH (37, Russell-square, W.C.).—5 P.M.: Special Lectures:—Prof. G. S. Woodhead: Some of the Questions raised by Recent Researches on Cancer.

FRIDAY (6th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Dr. E. Waggett. Clinique. (Ear.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—2 P.M.: Medical and Surgical Clinics. 2.15 P.M.: X Rays. Diseases of the Throat, Nose, and Ear. 2.30 P.M.: Operations Diseases of the Skin. 5 P.M.: Lecture:—Mr. Bidwell: Short-circuiting Operations in Intestinal Obstruction.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. R. Bradford: Medicine. 3.15 P.M.: Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Skin.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M.: Clinical Lecture:—Dr. J. Collier: Cerebral Diplegia.

SATURDAY (7th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Diseases of the Throat, Nose, and Ear. 2 P.M.: Medical and Surgical Clinics. 2.15 P.M.: X Rays. 2.30 P.M.: Operations.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich.)—2.30 P.M.: Operations. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 11 A.M.: Eye.

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MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. I. of 1906, which is completed with the issue of to-day, will be given in the next number of THE LANCET.

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VOLUMES for the first half of the year 1906 will be ready shortly. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

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(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 28th, 1906.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks
June 22	30·16	W.	...	126	78	64	64	70	Fine
" 23	30·02	S.E.	...	117	79	64	65	72	Fine
" 24	29·85	S.W.	0·26	109	72	60	60	63	Overcast
" 25	30·12	S.W.	...	112	71	57	59	63	Cloudy
" 26	30·07	W.	...	122	76	59	61	67	Fine
" 27	29·93	W.	...	121	76	57	59	65	Fine
" 28	29·86	S.W.	...	109	70	62	62	65	Raining

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